

XIV.—*Contributions towards a Knowledge of the Burmese Flora.*

Part II.—By S. KURZ.

(Continued from Vol. XLIII, p. 141.)

RUTACEÆ.

Conspectus of genera.

A. Fruit separating into 2 to 5 distinct 2-valved carpels.

Trib. I. ZANTHOXYLÆÆ. Flowers usually polygamous. Disk free, or rarely wanting. Styles basilar or ventral, more or less free. Fruit-carpels coriaceous, the endocarp persistent or separating elastically.

× Leaves opposite or nearly so, rarely intermixed with nearly alternate ones. Unarmed.

EVODIA. Stamens 4-5. Leaves often compound, rarely 1-foliolate.

MELICOPE. Stamens 8. Leaves often 1- rarely 3-foliolate.

× × Leaves all alternate. Often armed.

ZANTHOXYLON. Petals 3-5, rarely none. Stamens as many. Leaves often pinnate.

B. Fruit a drupe or berry, rarely a capsule.

Trib. II. TODDALIÆÆ. Flowers usually polygamous. Disk free. Style single. Albumen usually present.

ACRONYCHIA. Petals 4. Stamens 8. Drupe or capsule 4-celled. Erect unarmed trees with 1-3-foliolate leaves.

TODDALIA. Petals 2-5. Stamens as many. Berry 4-7-celled. Climbers, often armed, with usually 3-foliolate leaves.

Trib. III. AURANTIÆÆ. Flowers hermaphrodite. Petals and stamens free or connate. Style simple. Ovules 1, 2 or more in each cell. Berry often pulpy, with a coriaceous or woody rind. Albumen none.

× *Ovary-cells with 1 or 2 ovules only.*

+ Style persistent, not jointed at the base.

GLYCOSMIS. Calyx 5-parted or -toothed. Stamens 10, free. Ovules solitary. Leaves pinnately 5-1—or rarely 7-foliolate.

+ + Style jointed at the base, deciduous.

† Leaves pinnate or 3-foliolate.

* Ovules 2 in each cell.

O Leaves pinnate or pinnately 3-foliolate.

‡ Cotyledons plano-convex, fleshy. Petals imbricate.

CHALCAS. Filaments linear-subulate. Unarmed, the flowers in terminal cymes.

CLAUSENA. Filaments dilated at the base. Unarmed, the flowers in panicles or racemes.

‡ ‡ Cotyledons crumpled, leafy. Petals valvate.

MICROMELUM. Filaments linear-subulate. Unarmed, the flowers in terminal corymbs.

O O Leaves digitately 3-foliolate.

LUVUNGA. Calyx cup-shaped. Stamens 8 or 10. Armed or not.

* * Ovules solitary in each cell.

TRIPHASIA. Calyx 3-lobed. Stamens 6. Spiny; leaves digitately 3-foliolate; flowers almost solitary.

LIMONIA. Calyx 4- or 5-lobed or -parted. Stamens 8—10. Armed; leaves pinnate.
 † † Leaves 1-foliolate or simple.

PARAMIGNYA. Anthers linear-oblong. Disk elongate. Calyx usually cup-shaped. Climbers, armed. Berries without pulp.

ATALANTIA. Anthers ovate or cordate. Disk cup-shaped. Calyx often irregular. Trees or shrubs, often armed. Berries with vesicular pulp.

× × Ovary-cells with numerous ovules.

† Rind of berry leathery. Leaves 1-foliolate.

CITRUS. Stamens 20—60, often connate. Trees, usually spiny.

† † Rind of berry woody. Leaves compound. Trees.

FERONIA. Ovary 5—6-celled. Leaves pinnate.

AEGLE. Ovary 8- to many-celled. Leaves trifoliolate.

Evodia, Forst.

Conspectus of species.

× Panicles small, contracted, usually much shorter than the petioles.

Branchlets 4-cornered and marked with 4 prominent longitudinal lines; leaves 1—3-foliolate, the leaflets sessile; stamens shorter than the petals, *E. viticina*.

Branchlets quite terete; leaves 8-foliolate, the leaflets on short petiolules, lively green, .. *E. triphylla*.

× × Panicles corymbose, spreading, as long or longer than the petiole.

Branchlets terete, thick; leaflets shortly petioluled, dark bluish-green, *E. Roxburghiana*.

1. *E. VITICINA*, Wall. Cat. 1219; Hf. Ind. Fl. I. 489.

HAB. Tenasserim, Tavoy.

2. *E. TRIPHYLLA*, DC. Prod. I. 724; Hf. Ind. Fl. I. 488.

HAB. Frequent in the damp hill-forests, and entering the drier ones, from Martaban down to Tenasserim, at 3000 to 5000 ft. elevation.—Fl. Febr., March; Fr. Apr., May.

3. *E. ROXBURGHIANA*,* Bth. Fl. Hongk. 59; Hf. Ind. Fl. I. 487.—(*Xanthoxylon triphyllum*, Wight Jc. t. 204; *Fagara triphylla*, Roxb. Fl. Ind. I. 416).

HAB. Tenasserim.

Roxburgh's figure of the fruit in his MS. drawings shews that the size of the carpels and seeds does not differ from that of the plant formerly usually taken for *E. triphylla*.

Melicope, Forst.

1. *M. ? HELFERI*, Hf. Ind. Fl. I. 492.

HAB. Tenasserim (or Andamans?) (*teste* Hf.).

Zanthoxylum, L.

Conspectus of species.

* Cymes axillary, or axillary and terminal. Branches alternate. Leaves pinnate.

× Rachis of leaves winged. Flowers apetalous.

- Leaflets 2—3 in. long, glandular-crenulate; cymes dense, $\frac{1}{2}$ —1 in. long; fruit-carpels usually by 4—2, *Z. acanthopodium*.
 Leaflets coarsely crenate, $\frac{1}{2}$ —1 in. long, *Z. Andamanicum*.
 × × Rachis of leaves not winged. Flowers 4—5-petalous.
 Leaflets in 2—3 pairs, glossy on both sides; cymes axillary, *Z. Hamiltonianum*.
 * * * *Cymes terminal. Branches opposite*.
 Leaflets glandular-crenate, in 7—10 pairs, *Z. Budrunga*.

1. *Z. ACANTHOPODIUM*, DC. Prod. II. 727; Hf. Ind. Fl. I. 423.

HAB. Ava, hills east of Bhamo.

2. *Z. ANDAMANICUM*, Kurz MS.

HAB. In the tropical forests of Termoklee island, west of South Andaman.

A very distinct small-leaved species, but the flowers and fruits are unknown.

3. *Z. HAMILTONIANUM*, Wall. Cat. 7117; Hf. Ind. Fl. I. 494.

HAB. Burma (*teste* Hf.).

4. *Z. BUDRUNGA*, DC. Prod. I. 728; Hf. Ind. Fl. I. 495. (*Fagara Budrunga*, Roxb. Fl. Ind. I. 447).

HAB. Not unfrequent in the tropical and moister upper mixed forests from Chittagong, Pegu, and Martaban down to Tenasserim.—Fr. Sept.

Doubtful species.

1. *Z. spondiæfolium*, Wall. Cat. 1217; Hf. Ind. Fl. I. 496.

HAB. Amherst (Wall.) *teste* Hf.

Acronychia, Forst.

1. *A. CYMINOSMA*, F. Muell. Fragm. Phyt. Amstr. I. 27. (*A. laurifolia*, Bl. Bydr. 245; Hf. Ind. Fl. I. 498; *Cyminosma pedunculata*, DC. Prod. I. 722; Wight Ill. t. 65).

HAB. Not unfrequent in the tropical forests of the Andamans; also Pegu and Chittagong.—Fl. RS.

Toddalia, Juss.

1. *T. ASIATICA*, (*Paullinia Asiatica*, L. sp. pl. 524; *T. aculeata*, Pers. Ench. I. 249; Hf. Ind. Fl. I. 497 (excl. syn. *Zanthox. nitidum*, Wall.) Wight Ill. t. 66; *Scopolia aculeata*, Sm. Icon. ined. sub. t. 34; Roxb. Fl. Ind. I. 616).

VAR. α . *ACULEATA*, (*T. aculeata*, Pers.), petioles and often also the midrib beneath hooked-prickly; panicles usually smaller and less branched.

VAR. β . *FLORIBUNDA*, (*T. floribunda*, Wall. Pl. As. rar. III. 17. t. 232), petioles and midrib of leaves unarmed; panicles often more compound.

HAB. Frequent in the tropical forests from Ava and Martaban down to Pegu, up to 3000 ft. elevation.—Fl. June.

N. B.—It is possible that in Wallich's Herbarium *Toddalia* and *Zanthoxylon nitidum*, DC., are mixed, but the Wallichian specimens in HBC., as well as those cultivated in this garden, all belong to DeCandolle's species.

Glycosmis, Correa.

Conspectus of species.

* *Anthers blunt, not gland-tipped.*

O Berries oboval-oblong to oblong, leaden blue.

Petals longer persistent; filaments flat, from a narrower base gradually broader towards the triangular apex; bark pale coloured, *G. cyanocarpa*.

O O Berries more or less globular, from watery flesh-coloured to crimson.

Petals very deciduous; filaments from a broader base attenuated upwards; nerves of leaflets prominent above; bark pale coloured, *G. trifoliata*.

Petals very deciduous, lanceolate, about 3 lin. long; filaments elongate, filiform; bark brown, *G. arborea*.

** *Anthers gland-tipped.*

Petals longer persistent, about $1\frac{1}{2}$ lin. long; anthers cordate; filaments flat, from a narrower base gradually broader towards the triangular apex; bark white, *G. pentaphylla*.

1. *G. CYANOCARPA*, Spreng. Syst. Veg. IV/2. 161; Miq. Fl. Ind. Bat. I/2. 521.—(*Cookia cyanocarpa*, Bl. Bydr. 136).

VAR. *a.* GENUINA, flowers in peduncled terminal and axillary panicles, rarely reduced to cymes.

VAR. *β.* CYMOSA, (*G. tetraphylla*, Wall. and *G. oxyphylla*, Wall. ap. Voigt. Cat. Hort. Calc. 139), flowers in short peduncled or almost sessile quite glabrous or rarely rusty tomentose cymes axillary or axillary and terminal, rarely transformed into panicles.

HAB. Var. *β.* Not unfrequent in the tropical forests of the Pegu Yomah.—Fl. Apr.

2. *G. TRIFOLIATA*, Spreng. Syst. Veg. IV/2 162; Miq. Fl. Ind. Bat. I/2. 521.

VAR. *a.* GENUINA, leaves green or yellowish in drying; panicles or cymes shorter, more or less rusty or tawny tomentose; ovary glabrous or tawny pubescent.

VAR. ? *β.* FUSCESCENS, leaves fuscicent in drying; panicles larger and more compound, quite glabrous.

HAB. Var. *a.* In Chittagong and Tenasserim; var. *β.* frequent in the tropical forests all over Burmah from Chittagong, Pegu, and Martaban down to Tenasserim and the Andamans.—Fl. HS.; Fr. RS.

All the specimens of var. *β.* are in young bud only, and therefore the identification with *G. trifoliata* is doubtful. Those of var. *a.* are in young bud only and also doubtful; they can equally well belong to *G. insularis*.

3. *G. ARBOREA*, Corr. in Ann. Mus. VI. 386; DC. Prod. I. 538. (*Limonia arborea*, Roxb. Corom. Pl. I. t. 85. and Fl. Ind. II. 381).

VAR. *a*. GENUINA, calyx-lobes acute; ovary sessile; leaves often serrate; panicles peduncled.

VAR. *β*. INSULARIS, calyx-lobes bluntish; ovary usually stalked; leaves entire; cymes small, sessile, rusty-villous.

HAB. - Var. *β*. Common in the tropical forests of the Andamans.—Fl. Febr.; Fr. Apr. May.

4. G. PENTAPHYLLA, Corr. in Ann. Mus. VI. 386; DC. Prod. I. 538; WA. Prod. I. 93; Bedd. Fl. Sylv. Madr. Anal. 43. t. 6. f. 6. (*Limonia pentaphylla*, Retz. Obs. V. 24; Roxb. Corom. Pl. t. 84. and Fl. Ind. II. 381; *Limonia arborea*, Bot. Mag. t. 2074).

HAB. Frequent all over Burmah, in the mixed and tropical forests, and more especially in the shade of village-bushes and bamboo-jungles.—Fl. CS.; Fr. HS.

Chalcas, L. (1767) (Murraya, L. 1771).

Conspectus of species.

Leaflets 3 to 8; petals nearly $\frac{1}{2}$ in. long, *C. paniculata*.
Leaflets 10 to 20; petals about 2 lin. long, *C. Koenigii*.

1. C. PANICULATA, L. Mant. 1261; F. Muell. in Contr. New Hebrid. 7.—(*Murraya exotica*, L. Mant. 563; Hf. Ind. Fl. I. 502).

HAB. Common in the tropical forests of the Pegu Yomah and Martaban down to Tenasserim and the Andamans.—Fl. HS.; Fr. May, June.

2. C. KENIGII, (*Murraya Koenigii*, Spreng. Syst. veg. II. 315; Hf. Ind. Fl. I. 503.—(*Bergera Koenigii*, L. Mant. 563; Roxb. Corom. Pl. II. t. 112. and Fl. Ind. II. 375; Wight Icon. t. 13; Griff. Not. Dicot. 497. t. 586. f. 3; *Murraya foetidissima*, T. et B. in Tydsch. Ned. Ind. XXV. 25).

HAB. Rather frequent along choungs in the tropical forests of the eastern slopes of the Pegu Yomah; also Chittagong.—Fl. March.

Doubtful species.

1. *Murraya elongata*, DC. ap. Hf. Ind. Fl. I. 503.

HAB. Ava, Taong-dong (Wall.).

Clausena, Burm.

Conspectus of species.

* *Panicle terminal.*

O Ovary glabrous.

Softly villous; leaves pinnately 5-foliolate; flowers 4-merous, *C. macrophylla*.
Inflorescence and leaves glabrous; petiole and rachis terete or nearly so; leaflets usually 7 (5—9), not or hardly oblique; flowers usually 4- rarely 5-merous, *C. heptaphylla*.
Inflorescence and leaves glabrous; rachis more or less winged; leaflets 13—17, oblique; flowers 5-merous, *C. Wallichii*.

O O Ovary more or less hirsute or pubescent.

Inflorescence and other parts more or less shortly hirsute or puberulous; rachis terete;

leaflets 15—30, oblique; flowers 5-merous, *C. excavata*.

Inflorescence and the tubercled petioles densely and shortly tawny tomentose; leaflets 5—9; young berries densely fascicled-tomentose; flowers 5-merous, *C. Wampi*.

* * *Panicles or racemes axillary.*

All parts shortly pilose; leaflets 5 to 17; ovary and the long red berries glabrous; flowers 4-merous, *C. suffruticosa*.

1. *C. MACROPHYLLA*, Hf. Ind. Fl. I. 504.

HAB. Upper Tenasserim, banks of Salween at Troglá.

2. *C. HEPTAPHYLLA*, WA. Prod. I. 95; Hf. Ind. Fl. I. 504.—(*Amyris heptaphylla*, Roxb. Fl. Ind. II. 248).

HAB. Chittagong; Tenasserim (*teste* Hf.).

3. *C. WALLICHI*, Oliv. in Journ. Linn. Soc. V. Suppl. II. 35; Hf. Ind. Fl. 505.—(*Cookia* sp., Griff. Not. Dicot. 469. t. 587. f. 2?). VAR. β . LUXURIANS, rachis leafy-winged; leaflets only in 4—2 pairs with an odd one, 4—8 in. long, remaining green in a dried state.

HAB. Var. *a*. Upper Tenasserim; var. β . rare in the tropical forests of the eastern slopes of the Pegu Yomah. Fl. March.; Fr. Apr.

4. *C. EXCAVATA*, Burm. Fl. Ind. 87; Hf. Ind. Fl. I. 504.—(*Amyris Sumatrana*, Roxb. Fl. Ind. II. 250; *Amyris punctata*, Roxb. l. c. 251.)

HAB. Frequent in the tropical and moister upper mixed forests, all over Burmah and the adjacent provinces, from the plains up to 2000 ft. elevation. Fl. Apr. May; Fr. June, Jul.

*5. *C. WAMPI*, Blanco Fl. Filip. 358; Hf. Ind. Fl. I. 505.—(*Cookia punctata*, Sonner. Voy. II. 130. t. 131; Roxb. Fl. Ind. II. 382).

HAB. Cultivated in Chittagong.

6. *C. SUFFRUTICOSA*, WA. Prod. I. 96. in adn.; Hf. Ind. Fl. I. 506.—(*Amyris saffruticosa*, Roxb. Fl. Ind. II. 250).

VAR. β . PAUCIJUGA, leaflets only in 2 to 3 pairs with an odd one.

HAB. Chittagong, Seetakoond hills; var. β . not unfrequent in the Eng- and dry forests of the Prome district.—Fl. March.

Micromelum, Bl.

Conspectus of the species.

Tree; petals $2\frac{1}{2}$ lin. long; ovary slightly appressed-pubescent; young berries stalked glabrous, *M. pubescens*.

Meagre shrub up to 4 ft. high; petals 2 lin. long; ovary densely tawny hirsute; young berries sessile or nearly so, puberulous, *M. hirsutum*.

I. *M. PUBESCENS*, Bl. Bydr. 138; Hf. Ind. Fl. I. 501.—(*Bergera integerrima*, Roxb. Fl. Ind. III. 376.)

VAR. *a*. GENUINA, leaves on both sides or at least along the nerves beneath, the petioles, and rachis puberulous.

VAR. β . GLABRIUSCULA, leaves quite glabrous.

HAB. Both varieties frequent in the tropical and moister upper mixed

forests all over Burma from Chittagong and Ava down to Tenasserim and the Andamans.—Fl. Jan. March ; Fr. Apr. June.

2. *M. HIRSUTUM*, Oliv. in Linn. Proc. V. Suppl. II. 41 ; Hf. Ind. Fl. I. 502.—(*M. Zeylanicum*, Wight in Thw. C. P. 188).

VAR. *α*. *GENUINUM*, all parts more or less shortly hirsute or puberulous ; leaflets smaller.

VAR. *β*. *GLABRESCENS*, (*Aurantia*cea, Wall. Cat. 8517.) the young shoots only tawny puberulous, all other parts glabrous or nearly so ; calyx shortly 5-toothed, puberulous ; petals puberulous.

HAB. Var. *α*. Very frequent in the open and dry forests, especially in the Eng-forests, all over Burma from Ava and Martaban down to Tenasserim ; var. *β*. in Tenasserim from Moulmein southwards (Helf. 535/1).—Fl. March, Apr.

Luvunga, Ham.

Conspectus of species.

Filaments glabrous, more or less connate, *L. scandens*.
Filaments glabrous, free ; flowers much smaller, *L. eleutherandra*.

1. *L. SCANDENS*, Ham. ap. Oliv. in Linn. Proc. V. Suppl. II. 43 ; Hf. Ind. Fl. I. 509 ; Bot. Mag. t. 4522.—*Limonia scandens*, Roxb. Fl. Ind. II. 380).

HAB. Burma (Ava ?) ; Chittagong.

2. *L. ELEUTHERANDRA*, Dalz. in Hook. Kew. Journ. Bot. II. 258 ; Hf. Ind. Fl. I. 509, excl. syn. Bl.—(*Luvunga Tavoyana*, Wall. Cat. 6383).

HAB. Tenasserim, ? Tavoy, (*teste* Hf.)

Triphasia, Lour.

1. *T. TRIFOLIATA*, DC. Prod. I. 536 ; Hf. Ind. Fl. I. 507.

HAB. Tennesserim, probably wild.—Fl. Fr. ∞.

Limonia, L.

Conspectus of species.

Spiny tree ; leaflets opposite ; inflorescence puberulous ; berries globose, sessile
..... *L. acidissima*.

Unarmed shrub ; leaflets alternate ; inflorescence glabrous ; berries ovoid, shortly stalked, *L. alternans*.

1. *L. ACIDISSIMA*, L. sp. pl. 554 ; Hf. Ind. Fl. I. 507.—(*L. crenulata*, Roxb. Corom. Pl. I. t. 86. and Fl. Ind. II. 381).

VAR. *β*. *PUBESCENS* (*L. ? pubescens*, Wall. Cat. 6365 ; Hf. Ind. Fl. I. 507), prickles on the branches short, the wings of the petiole narrow, leaflets bluntish, the terminal one long but bluntish acuminate, the petioles and nerves beneath softly puberulous.

HAB. Var. *a*. Ava, along the Irrawaddi, apparently frequent; var. *β*. Ava, Taong dong; and Prome hills.

2. L. ALTERNANS, Wall. ap. Voigt. Hort. Calc. 139; Hf. Ind. Fl. I. 508.

HAB. Not unfrequent in the upper-mixed, and sometimes in the moist, forests of the Pegu Yomah and Arracan; also Tenasserim, Mergui.—Fl. May.

Paramignya, Wight.

Conspectus of species.

* Petals about 8 lin. long. Calyx largish, cupular, broadly lobed.

Style elongate; calyx and pedicels tomentose, the latter as long or a little longer than the calyx, *P. monophylla*.

Style short; calyx and the pedicels glabrous, the latter 1 in. or thereabouts long, .. *P. grandiflora*.

* * Petals 2—4 lin. long. Calyx small, with acute lobes.

O Berries terete.

Young shoots more or less puberulous; style short, hirsute or villous, ... *P. Griffithii*. Glabrous; style very short, like the ovary glabrous, *P. citrifolia*.

O O Berries 3—4-angular.

Erect tree, the spines 1—1½ in. long, straight; calyx glabrous, *P. angulata*.

1. *P. MONOPHYLLA*, Wight Ill. I. 108. t. 42; Hf. Ind. Fl. I. 510.—

HAB. Tenasserim, Moulmein district at 5000 feet elevation (*teste* Oliv.).

2. *P. GRANDIFLORA*, Oliv. in Linn. Proc. V. Suppl. II. 42; Hf. Ind. Fl. I. 510.

HAB. Tenasserim, Tavoy.—Fl. Aug.

3. *P. GRIFFITHII*, Hf. Ind. Fl. I. 510.—(*Citrus scandens*, Geoff. Not. Dicot. 495, t. 587. f. 1).

HAB. Ava, at the serpentine mines of Hookhum valley; Pegu (*teste* Hf.).

4. *P. CITRIFOLIA*, Hf. Ind. Fl. I. 510, non Oliv.—(*Limonia citrifolia*, Roxb. Fl. Ind. II. 579.; *P. micrantha*, Kurz in And. Rep. App. B. 4).

HAB. In the tropical forests of Chittagong and the Andamans.—Fl. June, July.

5. *P. ANGULATA* (*Citrus angulatus*, Willd. sp. pl. III. 1426; DC. Prod. I. 540; *Limonellus angulosus*, Rumph. Herb. Amb. 110. t. 32; *Limonia angulosa*, WA. Prod. I. 91, in adn.; Miq. Fl. Ind. Bat. I. 2-521; *Atalantia longispina*, Kurz in Journ. As. Soc. Beng. 1872. 295; *Paramignya longispina*, Hf. Ind. Fl. I. 511; *Gonocitrus angulatus*, Kurz in Journ. As. Soc. Beng. 1873. 228. t. 18).

HAB. In the mangrove and tidal forests of Pegu and Tenasserim (also Sunderbuns, Malacca, and the Moluccos).

N. B.—This species has got quite an array of synonyms. I attempted to establish a new genus upon it on account of the angular fruits and absence of pulp, but on examining the fruits of several other *Paramignyas*, I find that they also seem to be pulpless.* *Atalantia missionis*, Oliv. (Hf. Ind. Fl. I. 513, excl. syn. Turcz.) has curiously enough retained its place in *Atalantia*, although habit and generic characters place its beyond any doubt in *Paramignya*, and in habit it approaches very much the above species.

Atalantia, Corr.

Conspectus of species.

× Calyx irregularly lobed, split to the base on one side.

Berries the size of a large pea or small cherry, *A. monophylla*.
 Berries the size of a wood-apple, *A. macrophylla*.

× × Calyx regularly 4-lobed.

Flowers shortly pedicelled, in short racemes, *A. caudata*.

1. **A. MONOPHYLLA**, Corr. in Ann. du Mus. VI. 383 ; Hf. Ind. Fl. I. 511.—(*A floribunda*, Wight. Icon. t. 1611. ; *Limonia monophylla*, Lin. Mant. alt. 237 ; Roxb. Fl. Ind. II. 378 and Corom. Pl. I. t. 82 ; *A. puberula*, Miq Ann. Mus. Lugd. Bat. I. 211 ; *Chilocalyx ellipticus*, Turcz. in Bull. Natur. Mosc. 1863, 588).

HAB. Ava, about Segain, very frequent.—Fl. Octob.

2. **A. MACROPHYLLA** (*A monophylla* var. *macrophylla*, Oliv. in Linn. Proc. V. Suppl. II. 24 ; Hf. Ind. Fl. I. 512).

HAB. Frequent along the beaches of the Andaman islands ; also Tenasserim.—Fr. Apr. May.

3. **A. CAUDATA**, Hf. Ind. Fl. I. 513 ?—

HAB. Frequent in the tropical forests of the Pegu Yomah, especially along choungs.

The Burmese plant is a middling-sized tree of elegant appearance but spiny. I have not met either with flowers or fruits and therefore the identification must remain doubtful.

Citrus, L.

Conspectus of species.

× Young shoots and nerves of leaves beneath pubescent or puberulous ; flowers and fruits large, *C. decumama*.

× × All parts glabrous.

O Style very short.

Flowers small ; stamens free ; petioles leafy and almost as long and as broad as the blade itself, *C. hystrix*.

O O Style as long as the ovary or much longer.

† Petals 8 to 10 lin. long.

* The berries of *P. littoralis*, Miq., a species nearly allied to *P. angulata*, has pulp, but the dried ones appear pulpless.

Leaves acuminate or acute, the petiole often winged; berries globular, without a knob; filaments cohering by 3—4, *C. Aurantium*.

Leaves blunt or nearly so, the petiole not winged; berries oblong to globose, with a knob, the skin usually thick; filaments free or polyadelphous, *C. medica*.
 † † Petals 3—4 lin. long.

Calyx small; berries globular, sweet or acid, the skin usually thin, *C. nobilis*.

*1. *C. DECUMANA*, L. sp. pl. 1100; Roxb. Fl. Ind. III. 393; Hf. Ind. Fl. I. 516.

HAB. Often cultivated by Burmans, especially in the southern provinces.

2. *C. HYSTRIX*, DC. Prod. I. 539; Hf. Ind. Fl. I. 515.

HAB. Not unfrequent in the tropical forests of the Martaban hills; also in the adjoining Siamese province Kyouk-Koung; often cultivated in native gardens.

*3. *C. AURANTIUM*, L. sp. pl. 1100; Hf. Ind. Fl. I. 515.

HAB. Here and there cultivated in villages.

4. *C. MEDICA*, L. sp. pl. 580; Roxb. Fl. Ind. III. 392; Hf. Ind. Fl. I. 514. exl. var. 4.

VAR. *α*. *GENUINA*, Brandis Forest. Fl. 52; Hf. l. c.

VAR. *β*. *LIMONUM*, Brand. For. Fl. 52.

VAR. *γ*. *ACIDA*, Brand. For. Fl. 52; Hf. l. c.—(*C. acida*, Roxb. Fl. Ind. III. 390).

HAB. Var. *γ*. apparently wild in the Khaboung forests of the Pegu Yomah, west of Tounghoo (Brandis); the other varieties only cultivated.

*5. *C. NOBILIS*, Lour. Fl. Cochin. 569; DC. Prodr. I. 540.; Ker Bot. Rep. t. 211; Andr. Bot. Rep. t. 608 (*Aurantium Sinense*, Rumph. Herb. Amb. II. t. 34; *C. medica* var. 4 *limetta*, Brandis For. Fl. 52; Hf. Ind. Fl. I. 515).

VAR. *α*. *SINENSE*, (*Aurantium Sinense*, Rph. l. c.), petioles simple; berries with a sweet or bitter pulp. Sweet lime.

VAR. *β*. *LIMONELLUS*, (*Limonellus*, Rumph. l. c. t. 29; *C. limetta*, Wight Ic. t. 958), petioles short, winged; fruits acid. Acid lime.

HAB. Frequently cultivated in villages.

Feronia, Corr.

1. *F. ELEPHANTUM*, Corr. Act. Soc. Linn. V. 224; Roxb. Corom. Pl. II. t. 141. and Fl. Ind. II. 411; Wight Icon. t. 15.; Hf. Ind. Fl. I. 516.

HAB. In the dry forests of Prome District.—Fl. March, Apr.; Fr. Octob.

Aegle, Corr.

1. A. MARMELOS, Corr. Act. Soc. Linn. V. 224; Roxb. Corom. Pl. II. t. 143 and Fl. Ind. II. 579; Wight Icon. t. 16; Hf. Ind. Fl. I. 516; Bedd. Fl. Sylv. t. 161.

HAB. Much cultivated, especially in the Prome district, and said to occur wild in the forests also: I found the tree in those of the Toukyeghat, east of Tounghoo.—Fl. May; Fr. Octob. Nov.

SIMARUBEÆ.

Conspectus of genera.

Trib. I. SIMARUBEÆ. Ovary deeply lobed or the carpels distinct.

* Stamens twice as many as petals.

O Leaves simple.

SAMADERA. Calyx 3—5-parted. Disk large. Stamens 8—10. Drupe variously winged.

O O Leaves pinnate.

AILANTHUS. Calyx 5-cleft. Disk 10-lobed. Stamens 10. Fruit of 1 to 5 samaras.

* * Stamens as many as petals. Leaves pinnate. Carpels drupaceous.

O Styles free or cohering at the base only.

BRUCEA. Disk 4-lobed. Stamens glabrous. Flowers cymose-racemose.

O O Styles connate. Flowers in panicles.

PICRASMA. Disk thick. Stamens pilose.

EURYCOMA. Disk none. Stamens glabrous.

Trib. II. PICRAMNIEÆ. Ovary entire, 2—5-celled.

HARRISONIA. Calyx 4—5-cleft. Stamens 4 or 10. Ovary 4—5-celled. Leaves pinnate, or pinnately 1—3-foliate.

BALANITES. Sepals 5. Stamens 10. Ovary 5-celled. Leaves bifoliate.

Samadera, Gærtn.

1. S. INDICA, Gærtn. Fruct. II. t. 156. fig. inf.; Wight Ill. t. 68; Hook. Icon. Pl. t. 7; Hf. Ind. Fl. I. 519.

VAR. *α.* GENUINA, peduncles about as long as the leaves; drupes about $2\frac{1}{2}$ in. long, smooth or slightly net-veined; filaments in bud erect.

VAR. *β.* LUCIDA, (*Niota lucida*, Wall. Pl. As. rar. II. t. 168; *Samadera lucida*, Benn. in Hf. Ind. Fl. I. 519; *S. brevipedata*, Scheff. Obs. phyt. 88), peduncles shorter than the leaves; drupes $1\frac{1}{2}$ —2 in. long, strongly net-veined; filaments in bud twisted.

HAB. Var. *β.* Upper Tenasserim, Moulmein.

Ailanthus, Desf.

1. A. MALABARICUS, DC. Prod. II. 89; Wight Icon. t. 1604; Bedd. Fl. Sylv. t. 122; Hf. Ind. Fl. I. 518.

HAB. Rather rare in the tropical forests of the Khaboung valley, eastern slopes of Pegu Yomah. Fr. Apr.

Brucea, Mill.*Conspectus of species.*

Leaflets coarsely crenate-toothed; drupes about 2 lin. long, *B. Sumatrana*.

Leaflets quite entire; drupes about 3—4 lin. long, *B. mollis*.

1. *B. SUMATRANA*, Roxb. Fl. Ind. I. 449; Hf. Ind. Fl. I. 521.

HAB. Tenasserim, Mergui (Griff.)

2. *B. MOLLIS*, Wall. Cat. 8483; Hf. Ind. Fl. I. 521.

HAB. In the drier and damp hill-forests of Martaban and Upper Tenasserim, at 3000 to 4000 ft. elevation.—Fl. March.

Picrasma, Bl.

1. *P. JAVANICA*, Bl. Bydr. 248; Benn. in Horsf. Pl. Jav. rar. 197. t. 41; Miq. Fl. Ind. Bat. I/2. 679. t. 28; Hf. Ind. Fl. I. 520.—(*P. Andamanica*, Kurz And. Rep. App. B. IV; Hf. Ind. Fl. I. 520).

HAB. Frequent in the tropical forests from Martaban down to Tenasserim and the Andaman islands; rare in those of the Pegu Yomah.—Fl. March; Fr. Begin of R. S.

Eurycoma, Jack.

1. *E. LONGIFOLIA*, Jack in Roxb. Fl. Ind. ed. 1. II. 307; Griff. Not. Dicot. 435; Hf. Ind. Fl. I. 521.—(*E. Merguensis*, Planch. in Hook. Lond. Journ. V. 583).

HAB. Forests of Tenasserim from Tavoy southwards; Andamans (*teste* Bennet).

Harrisonia, R. Br.

1. *H. BENNETII*, Bth. and Hf. Gen. pl. I. 314; Hf. Ind. Fl. I. 519.—(*Lasiolepis paucijuga*, Benn. in Horsf. Pl. Jav. rar. 202. t. 42).

HAB. Very frequent in the dry forests of the Prome district; also in Martaban, Yoonzeleen, 2000 ft. (Brandis).—Fl. Apr.

Balanites, Del.

1. *B. ROXBURGHII*, Planch. in Ann. sc. nat. 4 ser. II. 258; Hf. Ind. Fl. I. 522.—(*Ximenia Aegyptiaca*, Roxb. Fl. Ind. II. 253; *B. Aegyptiaca*, Wight Icon. t. 274, non Del.).

VAR. β . *GRACILIS*, branchlets slender and glabrous or nearly so; inflorescence more glabrous than in the normal form and only puberulous, the peduncles and pedicels all very slender.

HAB. Ava; var. β . in the Prome District.—Fl. Apr.

OCHNACEÆ.*Conspectus of genera.*

Trib. I. OCHNEÆ. Ovary 2—10-celled, with a solitary ovule in each cell. Albumen none.

OCHNA. Stamens indefinite. Drupes 3 to 10, seated on the enlarged torus. Corymbs lateral.

GOMPHIA. Stamens 10. Drupes 3—5, seated on the enlarged torus. Panicles terminal.

TETRAMERISTA. Flowers 4-merous. Stamens 4. Fruit a coriaceous 4-seeded berry.

Trib. II. EUTHEMIDÆE. Ovary half 5-celled, with 2 ovules in each cell. Seeds with albumen.

EUTHMIS. Stamens 5. Racemes terminal.

Ochna, Schreb.

Conspectus of species.

* Styles free at the summit for nearly a line length.

Fruiting sepals erect-conniving; filaments as long or longer than the anthers;

tree, *O. Andamanica*.

* * Styles united to the apex.

× Filaments as long or longer than the anthers.

Petals usually 5; fruiting sepals reflexed; tree, *O. Wallichii*.

Petals 5; fruiting sepals erect-connivent; dwarf shrub, *O. fruticulosa*.

× × Filaments almost 4 times shorter than the anthers.

Petals usually 7—8; fruiting sepals erect-conniving; tree, *O. squarrosa*.

1. *O. ANDAMANICA*, Kurz in Journ. As. Soc. Beng. 1872, 295.

HAB. Frequent in the tropical forests of the Andamans.—Fl. March; Fr. May, June.

2. *O. SQUARROSA*, Roxb. Corom. Pl. I. t. 89 and Fl. II. 643; Wight Ill. t. 69. (*O. lucida*, Lamk. Dicot. IV. 510).

HAB. Ava (Mrs. Col. Burney).

3. *O. WALLICHII*, Planch. in Hook. Lond. Journ. V. 650; Hf. Ind. Fl. I. 524, excl. syn. Colebr. and Kurz. (*O. obtusata*, Wall. Cat. 28051; *O. lucida*, Griff. Not. Dicot. 464).

HAB. Very frequent in the tropical forests of Martaban and Tenasserim; less so along the eastern and southern slopes of the Pegu Yomah.—Fl. March; Fr. Apr. May.

4. *O. FRUTICULOSA*, Kurz in Journ. As. Soc. Beng. 1872, 295.

HAB. Frequent in the open forests, especially the eng-forests, all over Pegu and Martaban.—Fl. Apr. May; Fr. June, July.

Doubtful species.

1. *O. parviflora*, Griff. Not. Dicot. 464.

HAB. Forests of Moulmein.

Referred by Bennet as a variety to *O. Wallichii*, from which it seems to differ by its smaller flowers. I have not seen a specimen and the reflexed sepals seem to confirm Mr. Bennet's conclusion.

2. *O. ? brevipes*, Planch. in Hook. Lond. Journ. Bot. V. 652; Hf. Ind. Fl. I. 525.

HAB. Pegu.

Gomphia, Schreb.

1. *G. SUMATRANA*, Jack. Mal. Misc. V. 29; Hf. Ind. Fl. I. 525.—(*G. Sumatrensis*, Planch. in Hook. Icon. t. 712; *Ochna crocea*, Griff. Not. Dicot. 463).

HAB. Tenasserim, Mergui, along the sea-coast of the island Madamaca, Pator, (Griff.).

N. B.—Mr. Bennet has a *Tetramerista glabra* var. *sagittata*, based upon *Ancistrocladus ? sagittatus*, Wall. Cat. 1055, a plant which I have not seen, and which on account of its sagittate-based leaves cannot be a *Tetramerista*. He gives Tenasserim as one of the localities for it.

BURSERACEÆ.*Conspectus of genera.*

(In Burmese species the fruit is an indehiscent drupe.)

GARUGA. Torus broadly filling the urceolate calyx-tube. Calyx 5-cleft.

BURSERIA. Calyx small, 4—6-parted. Stamens 8—12, inserted at the base of the annular disk.

CANARIUM. Calyx 3-(rarely 2—5) cleft, valvate. Petals 3—5. Stamens 6—10. Drupes ovoid, more or less 3-angular, with a bony or hard putamen.

Garuga, Roxb.

1. *G. PINNATA*, Roxb. Corom. Pl. III. t. 208 and Fl. Ind. II. 400; Bedd. Fl. Sylv. t. 118; Hf. Ind. Fl. I. 528.

VAR. *α. GENUINA*, more glabrescent; drupes glabrous.

VAR. *β. MOLLIS* (*G. mollis*, Turcz. in Bull. Nat. Mosc. 1858, 457), more pubescent or villous, the drupes densely villous or pubescent.

HAB. Common in the mixed forests all over Burma from Chittagong and Ava down to Tenasserim and the Andamans, up to 3000 ft. elevation; var. *β.* with the typical form.—Fl. Febr. March; Fr. Begin. of R. S.

Bursera, L.

1. *B. SERRATA*, Wall. in Trans. Linn. Soc. XV. 362. t. 4.; Hf. Ind. Fl. I. 530.—(*Limonia pentagyna*, Roxb. Fl. Ind. II. 382).

HAB. Frequent in the tropical forests, especially along choungs, of the eastern slopes of the Pegu Yomah and Martaban.—Fl. Apr.

Canarium, L.*Conspectus of species.*

* Stipules subulate, entire, very deciduous.

Leaflets serrulate; disk-glands smooth, 6, free, cohering by pairs, *C. euphyllum*.

Leaflets entire; disk-lobes 3, hairy, united into a cup, *C. Bengalense*.

* * Stipules 2-cleft and pectinately cut, persistent.

Young buds covered by the crimson velvety bracts; leaflets entire and serrate,

. . *C. coccineo-bracteatum*.

1. *C. EUPHYLLUM*, Kurz in Journ. As. Soc. Beng. 1872, 295; Hf. Ind. Fl. I. 535.

HAB. Frequent in the tropical forests of South Andaman.—Fl. June.

2. *C. BENGALENSE*, Roxb. Fl. Ind. III. 136; Hf. Ind. Fl. I. 534.

HAB. Very rare in the moister upper-mixed forests of the Pegu Yomah.

3. *C. COCCINEO-BRACTEATUM*, Kurz in And. Rep. App. B. 4. and Journ. As. Soc. Beng. 1872. 296; Hf. Ind. Fl. I. 536.

HAB. Rather rare in the tropical forests of South Andaman.—Fl. May.

N. B.—*C. nitidum*, Bennet = *C. patentissimum*, Miq.; *C. grandiflorum*, Bennet = *C. Mahassan*, Miq. Besides these Maingay's No. 310 = *C. eupteron*, Miq., and ejusd. No. 307 = *C. rugosum*, Miq.

MELIACEÆ.

Conspectus of genera.

A. Ovary-cells 1—2 ovuled. Seeds not winged.

Trib. I. MELIÆ. Stamens united into a tube. Albumen thin, fleshy. Cotyledons thin, leafy or plano-convex.

* Capsule loculicidally 5-valved.

MUNRONIA. Calyx-lobes 5, almost leafy. Petals adnate to the elongate staminal tube. Disk tubular, sheathing the ovary. Leaves pinnate or pinnately 3-foliolate.

* * Fruit a drupe.

MELIA. Calyx 5—6-parted. Petals free. Disk annular. Drupes containing a single 1—5-celled putamen. Leaves pinnate or decomposed.

CIPADESSA. Calyx 5-toothed. Petals free, short. Disk cupular. Drupes containing 5 horny pyrenes.

Trib. II. TRICHILIEÆ. Stamens united into a tube, very rarely free. Ovary-cells with one or two, rarely more ovules. Albumen none. Cotyledons thick.

* Disk free, tubular or cylindrical. Style usually elongate.

O Leaves pinnate (leaflets 5 or more).

DYSOXYLON. Calyx small, 4- or 5-toothed, opened while in young bud. Petals valvate, free. Ovary 3—5-celled. Capsule pear-shaped, opening loculicidally. Arillus none.

DIHYMOCITON. Calyx small or large, consisting of 5—7 distinctly imbricate sepals. Petals valvate, adnate to the lobed or toothed staminal tube for nearly $\frac{1}{4}$ of their length. Capsule globose, berry-like, opening loculicidally. Arillus none.

SCHIZOCITON. Calyx usually campanulate, obscurely 4- rarely 5-toothed, open already in bud. Petals valvate or imbricate, united for $\frac{1}{3}$ to nearly $\frac{1}{2}$ of their length with the toothed or lobed staminal tube and appearing tubular. Ovary 3—4-celled. Capsule usually pyriform, opening loculicidally. Arillus complete or incomplete.

O O Leaves pinnately 3-foliolate.

SANDORICUM. Calyx tubular. Petals imbricate. Berry globular, indehiscent.

* * Disk none, or annular or stalk-like, or confluent with the staminal tube. Style usually short or none.

† Anthers included, or almost included in the staminal tube. Seeds arillate.

AGLAI. Petals 5. Anthers as many. Ovary 1—3-celled. Berry 1—2-celled, indehiscent.

AMOORA. Petals 3—5. Anthers twice as many or more than twice as many as petals. Ovary 3—5-celled. Capsule leathery, opening loculicidally.

† † Anthers exserted or the filaments upwards free.

WALSURA. Petals 5. Berry indehiscent or follicular-dehiscing along the suture. Seeds arillate.

B. Ovary-cells 3- to many-ovuled. Seeds usually winged.

Trib. III. SWIETENIÆ. Stamens united into a tube. Albumen present or not. Leaves pinnate.

CARAPA. Petals 4 or 5. Ovary-cells with 6 to 3 ovules. Capsule usually large, thick coriaceous, opening loculicidally. Seeds very large, with corky testa, without arillus, not winged.

SOYMIDA. Petals 5. Staminal tube cup-shaped, 10-lobed, the lobes 2-toothed. Disk rather broad. Seeds winged at both ends. Albumen none.

CHICKRASSIA. Petals 4 or 5. Staminal tube cylindrical, 10-crenate. Disk none. Seeds winged below. Albumen none.

Trib. IV. CEDRELEÆ. Filaments free, inserted outside of the disk. Valves of capsule separating from the axis. Seeds many. Leaves pinnate.

CEDRELA. Petals erect. Stamens 4—6. Disk raised or thin. Ovary 5-celled. Capsule opening septicidally. Seeds winged.

Munronia, Wight.

1. *M. WALLICHII*, Wight. Ill. Ind. Bot. 147; Hf. Ind. Fl. I. 543.—(*Turraea pinnata*, Wall. Pl. As. var. II. 21. t. 119; Bot. Mag. t. 1413; *M. Neilgherrica*, Wight Ill. I. 147. t. 54).

HAB. Rare on shady moist sandstone-rocks in the tropical forests of the central parts of the Pegu Yomah (Toung-nyo choung).—Fl. March.

Melia, L.

Conspectus of species.

* *Leaves simply pinnate. Ovary 3-celled.*

Leaflets entire, *M. excelsa*.

Leaflets serrate; drupes small, by abortion one-celled and 1-seeded, . . . *M. Azadirachta*.

** *Leaves twice pinnate. Ovary and drupes 5—8-celled, some of the cells in fruit usually empty.*

× Drupes about $\frac{1}{2}$ in. long, oblong or elliptical.

Leaflets serrate; staminal tube blue or dark lilac, slender, glabrous outside, about 3 lin.

long, *M. Azedarach*.

× × Drupes large, 1 in. long or longer. Staminal tube white.

Drupes ovate, hardly $\frac{1}{2}$ in. thick, 5 or fewer-celled; staminal tube about $1\frac{1}{2}$ —2 lin. long,

glabrous outside; leaflets crenate or ultimately entire, *M. dubia*.

Drupes twice as large, almost globose-obovoid, 5—8-celled; staminal tube 2 lin. long,

woolly at the summit; flowers larger, scurvy-tomentose outside, . . . *M. Birmanica*.

1. *M. EXCELSA*, Jack in Mal. Misc. I. 12; Griff. Not. Dicot. 499; Hf. Ind. Fl. I. 544.

HAB. Tenasserim, Mergui, probably cultivated.—Fl. Decb.

2. *M. AZADIRACHTA*, L. sp. pl. 550; Roxb. Fl. Ind. II. 394; Griff. Not. Dicot. 500; Bedd. Fl. Sylv. t. 14.; Hf. Ind. Fl. I. 544.—(*Azadirachta Indica*, A. Juss. in Mem. Mus. XIX. t. 13; Wight Icon. t. 17).

HAB. Not unfrequent in the dry forests of Prome District, especially on the higher ridges of the Yomah; also Ava.—Fl. March.

3. *M. AZEDARACH*, L. sp. pl. 550; Roxb. Fl. Ind. II. 395; Bot. Mag. t. 1066; Wight Icon. t. 160; Bedd. Fl. Sylv. t. 13; Hf. Ind. Fl. I. 544.—(*Melia sempervirens*, Sw. Prod. 67; Roxb. Fl. Ind. II. 395; Bot. Reg. t. 643; *M. sambucina*, Bl. Bydr. 162).

HAB. Prome and Ava, in and around villages, apparently only cultivated, wild in the adjoining Siamese provinces.—Fl. Febr. March; Fr. March, Apr.

4. *M. BIRMANICA*, Kurz in Journ. As. Soc. Beng. 1874. 183.

HAB. Frequent in the tropical forests of Martaban.—Fl. March, Apr.; Fr. Apr. May.

Cipadessa, Bl.

1. *C. BACCIFERA*, Miq. in Ann. Mus. Lugd. Bat. IV. b.—(*Melia baccifera*, Roth. Nov. sp. 215; *Elkebergia Indica*, Roxb. Fl. Ind. II. 392; *C. fruticosa*, Bl. Bydr. 162; Hf. Ind. Fl. I. 545; *Mallea Rothii*, A. Juss. in Mém. Mus. XIX. 222. t. 13. f. 6).

VAR. *α*. ROTHII, leaflets coarsely serrate or serrate-toothed.

VAR. *β*. INTEGERRIMA, leaflets all entire.

HAB. Var. *β*. Ava, Taong-dong (Wall.)—Fl. Nov.

Dysoxylum, Bl.

Conspicuous of species.

× Flowers in panicles.

Calyx petals and reproductive organs perfectly glabrous, *D. binectariferum*.

Calyx petals and staminal tube minutely pubescent, *D. procerum*.

× × Flowers in spikes or racemes.

Spikes arising from the trunk or old branches, densely flowered; leaflets opposite or nearly so, pale green, *D. cauliflorum*.

1. *D. BINECTARIFERUM*, Bedd. in Linn. Trans. XXV. 212; Hf. Ind. Fl. I. 546.—(*Guarea binectarifera*, Roxb. Fl. Ind. II. 240; *D. macrocarpum*, Thw. Ceyl. Pl. 60? Bedd. Fl. Sylv. t. 150?).

HAB. Chittagong; forests of South Andaman? (leaves only).—Fl. June; Fr. Febr.

2. *D. PROCERUM*, Hiern in Hf. Ind. Fl. t. 547.

HAB. Rare in the tropical forests of the southern slopes of the Pegu Yomah; more frequent in those of Tenasserim.—Fl. Decb.

N. B.—*D. brevipes*, Hiern = *D. costulatum*, Miq., in spite of a slight difference in the indument of ovary and tube.

3. *D. CAULIFLORUM*, Hiern in Hf. Ind. Fl. I. 549.

HAB. Tropical forests of South Andaman.

Schizochiton, Bl.

Conspectus of species.

* Flowers almost sessile or very shortly and robustly pedicelled.

Leaflets quite glabrous; anthers 6, *Sch. dysoxylifolius*.

Leaflets softly pubescent beneath; anthers 6—7, *Sch. grandiflorus*.

* * Flowers on slender pedicels.

Young parts and panicle and also the under-surface of leaves pubescent, *Sch. paniculatus*.

1. *SCH. DYSOXYLIFOLIUS*, Kurz in Journ. As. Soc. Beng. 1871. 49.—(*Chisogeton dysoxylifolius*, Hiern in Hf. Ind. Fl. I. 551).

HAB. Upper Tenasserim, Thounggyeen.—Fl. March.

2. *SCH. GRANDIFLORUS*, Kurz in Journ. As. Soc. Beng. 1872. 296.—(*Chisogeton grandiflorus*, Hiern in Hf. Ind. Fl. I. 552).

HAB. Frequent in the tropical forests of Martaban and Tenasserim.—Fl. March, Apr.

3. *SCH. PANICULATUS*, Hiern in Hf. Ind. Fl. I. 552.—(*Guarea paniculata*, Roxb. Fl. Ind. II. 242).

HAB. Burmah, probably Martaban (Brandis); Tenasserim, Tavoy (*teste* Hiern); Ava, on Taong dong (Wall. Cat. 8099. pp. mixed up with *Chickrassia* leaves).

N. B.—*Chisogeton holocalyx*, Hiern = *Schizochiton patens*, Spreng.

Sandoricum, Cav.

1. *S. INDICUM*, Cav. Diss. VII. t. 202. 203; Roxb. Fl. Ind. II. 392. and Corom. Pl. III. t. 261; Hf. Ind. Fl. I. 553.

HAB. Indigenous in the tropical forests of the southern slopes of the Pegu Yomah and in Tenasserim; much cultivated in Burmese villages.—Fl. Jan.; Fr. Apr. May.

Aglaia, Lour.

Conspectus of species.

* Inflorescence and often also the other parts more or less scaly especially while young.

× Leaflets usually in 2 or 1 pair with an odd one, nearly glabrous.

- Leaves pinnately 3-foliolate; panicles short and peduncled; scales of younger parts pale coloured, *A. Chittagonga*.
- Leaflets in 2 pairs with an odd one; scales of younger parts pale coloured; panicle small sessile, *A. Andamanica*.
- Leaflets in 2 pairs with an odd one; scales of younger parts rusty brown; panicles ample, about as long to half as long as the leaves, rather long-peduncled, *A. paniculata*.
 × × Leaflets usually in 8—5 pairs with an odd one, beneath densely silvery or coppery scaly.
- Panicle ample, densely silvery or coppery lepidote; flowers sessile, *A. argentea*.
 * * Calyx pedicels and usually the whole inflorescence rusty puberulous or tomentose from short stellate hairs.
 × Leaflets in 6—8 or more pairs.
- Leaflets beneath minutely and indistinctly scaly-tomentose, glabrescent, the lateral nerves all sharply prominent beneath; panicles, etc. rusty puberulous; flowers pedicelled; berries tawny velvety, *A. crassinervia*.
- Leaflets beneath sparingly fascicled-hairy, petiole panicle and nerves beneath densely rusty tomentose, *A. Griffithii*.
 × × Leaflets in 1 or 2 pairs with an odd one, rarely 1-foliolate.
- Panicles slightly stellately pubescent, soon glabrous; calyx and pedicels glabrous; net-venation conspicuous, *A. oligophylla*.

1. *A. CHITTAGONGA*, Miq. in Ann. Mus. Lugd. Bat. IV. 44.

HAB. Tropical forests of Chittagong and Arracan.

N. B.—Hiern apparently identifies the fruiting specimens No. 13 of Hb. Hf. and Th. with the perfectly different flowering ones collected by Griffith (viz. Nos. 1074 and 1066 Hb. Griff.) which belong to my *Amoora lactescens*.

2. *A. ANDAMANICA*, Hiern in Hf. Ind. Fl. I. 555.

HAB. Not unfrequent in the tropical forests of the Andamans.—Fr. Febr.

3. *A. PANICULATA*, Kurz Hb. 2043.

HAB. Rather rare in the tropical forests of the Pegu Yomah; Tenasserim (Helf. 1036—1037).

4. *A. ARGENTEA*, Bl. Bydr. 170; Miq. in Ann. Mus. Lugd. Bat. IV. 54.

HAB. Rare in the tropical forests of the eastern slopes of the Pegu Yomah.

5. *A. CRASSINERVIA*, K^{urz} in Hf. Ind. Fl. I. 556.—(*Cupania* sp. Wall. Cat. 8067. B).

HAB. Tenasserim (Helf. 1038).

6. *A. GRIFFITHII* (*A. minutiflora*, β. *Griffithii*, Hiern in Hf. Ind. Fl. 557; *Euphoria exstipulata*, Griff. Not. Dicot. 547).

HAB. Tenasserim (Helf. 1039); Mergui (Griff.).

7. *A. OLIGOPHYLLA*, Miq. Suppl. Fl. Sum. 507 and Ann. Mus. Lugd. Bat. IV. 41.—(*Meliacea Singaporeana*, Wall. Cat. 4887).

HAB. Tenasserim (Helf. 1046).

I have only fragments of the Wallichian plant, which so far agree.

A. Roxburghiana, as understood by Mr. Hiern, is a heterogeneous assemblage which, besides the above, includes also the Khasyan *A. undulata*, Miq. Ann. Mus. Lugd. Bat. IV. 44 (= *Milnea* sp. 17. Hf. and Th., referred by Hiern to *A. edulis*).

Amoora, Roxb.

Conspectus of species.

* Petals 3. Anthers 6—8.

× Flowers sessile, spiked, the male spikes forming large panicles.

Leaflets shortly acuminate; fertile spikes simple, many-flowered; male flowers about 4 lin. in diameter, the staminal tube entire at the apex, *A. Rohituka*.

× × Flowers pedicelled, cymose or racemose-cymose and paniced.

O Male panicles ample, as long to half as long as the leaves.

Leaflets shortly acuminate, thin coriaceous, the nerves prominent on both sides, the veins and net-venation distinct, *A. spectabilis*.

Leaflets blunt, smaller, coriaceous, the nerves above hardly visible and impressed, the veins and net-venation obsolete; fertile spikes few-flowered; flowers about 2 lin. in diameter, the staminal tube slightly 3-toothed, *A. cucullata*.

O O Panicles slender, shorter or as long as the petiole.

Leaflets green, conspicuously nerved and net-veined on both sides; flowers long pedicelled; panicle very lax, densely lepidote, *A. lactescens*.

** Petals 5. Stamens 10.

Panicles shorter than the petiole, like the petiole densely lepidote; leaves sparingly lepidote beneath, *A. dysoxyloides*.

1. *A. ROHITUCA*, WA. Prodr. I. 119; Bedd. Fl. Sylv. t. 132; Hf. Ind. Fl. I. 559.—(*Andersonia Rohituka*, Roxb. Fl. Ind. II. 213; Griff. Not. Dicot. 507. t. 589. f. 3).

HAB. Frequent in the tropical forests of the eastern slopes of the Pegu Yomah, and from Martaban down to Tenasserim, up to 3000 feet elevation.—Fl. Apr. May.

2. *A. SPECTABILIS*, Miq. Ann. Mus. Lugd. Bat. IV. 37; Hf. Ind. Fl. I. 561.

HAB. Rangoon (*teste* Hiern).

I have seen no Burmese specimens; the original Wallichian tree came from Assam (Gwálpára) and not from Nepal.

3. *A. CUCULLATA*, Roxb. Corom. Pl. III. 54. t. 258; Hf. and Ind. Fl. I. 560. (*Andersonia cucullata*, Roxb. Fl. Ind. III. 212).

HAB. Forests of Lower Pegu and Tenasserim.—Fl. Sept.

4. *A. LACTESCENS*, Kurz MS.

HAB. Rather rare in the tropical forests of Martaban, east of Toungoo (Hb. Kz. 1381).

5. *A. DYSOXYLOIDES*, Kurz MS.

HAB. Martaban, Yoonzeleen, at 900 feet elevation (Brandis).

Walsura, Roxb.

Conspectus of genera.

Subg. 1. EUWALSURA. Berries indehiscent or only very slowly and incompletely dehiscent along the sutures, usually velvety or tomentose.

* Panicles densely pubescent. Young shoots and petioles of young leaves puberulous.

Petals pubescent; filaments flat, at the very broad base somewhat coherent,

.. *W. trichostemon*.

* * Panicles minutely puberulous; leaves and petioles glabrous.

O Leaves coriaceous or firmly chartaceous.

Leaves beneath usually white-areolate within the net-venation; filaments broadly lanceolate, sprinkled with minute hairs, *W. robusta*.

Leaflets uniformly glaucous beneath; filaments linear, densely pubescent; flowers larger, *W. hypoleuca*.

O O Leaves thin chartaceous or almost membranous, the net-venation very thin and inconspicuous.

Leaves acuminate, uniformly glaucous beneath; young fruits acuminate, greyish velvety, *W. oxycarpa*.

Subg. 2. HEYNEA, Roxb. Berries dehiscent along the sutures, usually glabrous.

Glabrous or pubescent; leaflets in 3—6 pairs; panicles long-peduncled, *W. trijuga*.

1. *W. TRICHOSTEMON*, Miq. in Ann. Mus. Lugd. Bat. IV. 60.—(*W. villosa*, WA. Prod. I. 120. in adn., nomen nudum; Hf. Ind. Fl. I. 564.)

HAB. Frequent in the eng and low forests from Pegu and Martaban down to Tenasserim; also Ava.—Fl. March, Apr.; Fr. May, June.

N. B.—Wall. Cat. 8113 from Sylhet, which, according to Hiern, differs from the known species of *Walsura*, is *W. tubulata*, Hiern.

2. *W. ROBUSTA*, Roxb. Fl. Ind. II. 386; Hf. Ind. Fl. I. 565.

HAB. Rather rare in the tropical forests of the eastern slopes of the Pegu Yomah, but frequent in those of Martaban down to Tenasserim and the Andamans.—Fl. May; Fr. July.

3. *W. HYPOLEUCA*, Kurz in Journ. As. Soc. Beng. 1872. 296 excl. fruct.; Hf. Ind. Fl. I. 564.

HAB. Frequent in the tropical forests of the Andamans.—Fl. May, June.

4. *W. OXYCARPA*, Kurz MS.

HAB. Not unfrequent in the tropical forests of the Andamans.

5. *W. TRIJUGA* (*Heynea trijuga*, Roxb. Corom. Pl. III. 56. t. 260. and Fl. Ind. II. 390; Bot. Mag. t. 1738; Hf. Ind. Fl. I. 565.—(*Heynea quinquejuga*, Roxb. Fl. Ind. II. 391).

VAR. *a*. GENUINA, all parts (also the panicle) quite glabrous, or only the young shoots slightly pubescent; leaflets in 3 to 6 pairs.

VAR. *β*. PUBESCENS, (*Walsura pubescens*, Kurz in Journ. As. Soc. Beng. 1872. 397), all softer parts, inflorescence, and under surface of leaves, softly pubescent; leaflets usually in 4 pairs.

HAB. Var. *a.* Upper Tenasserim ; var. *β.* rather rare in the tropical forests along the eastern slopes of the Pegu Yomah, and in the Martaban hills, up to 2000 feet elevation.—Fl. Febr. March ; Fr. Apr.

Carapa, Aubl.

Conspectus of species.

Leaflets more or less ovate ; flowers 5-merous, about 2 lin. across, *C. Moluccensis*.
Leaflets obovate to obovate-oblong ; flowers 4-merous, about 4 lin. across, . . *C. obovata*.

1. *C. MOLUCCENSIS*, Lam. Encycl. Meth. I. 621 ; DC. Prod. I. 626. (*Granatum littoreum*, Rumph. Herb. Amb. t. 61. ; *Xylocarpus Granatum*, Koen. Naturf. XX. 2 ; A. Juss. in Mém, Mus. XIX. 244 ; Miq. Ann. Mus. Lugd. Bat.).

HAB. Not unfrequent along the rocky and sandy shores of the Andamans, especially along the western side.—Fr. Apr. May.

2. *C. OBOVATA*, Bl. Bydr. 179. (*Xylocarpus obovatus*, A. Juss. in Mém. Mus. XIX. 344 ; Miq. in Ann. Mus. Lugd. Bat. IV. 62 ; *Xylocarpus Granatum*, Roxb. Fl. Ind. II. 240 ; *Monosoma littorata*, Griff. Not. Dicot. 502. t. 588. f. 3. ; *Guarea oblongifolia*, Griff. Not. Dicot. 503 ?).

HAB. Frequent in the littoral forests, especially the tidal ones, all along the shores, from Chittagong down to Tenasserim and the Andamans.—Fl. June, July ; Fr. Apr. May.

Chickrassia, A. Juss.

1. *Ch. TABULARIS*, A. Juss. in Mém. Mus. XIX. 251. t. 22. f. 27 ; Wight Ill. t. 56 ; Bedd. Fl. Sylv. t. 9 ; Hf. Ind. Fl. I. 568.—(*Swietenia Chickrassa*, Roxb. Fl. Ind. II. 399).

Var. *a.* *GENUINA*, leaves and panicles glabrous ; capsules greyish, wrinkled-rough.

Var. *β.* *VELUTINA* (*Chickrassia velutina*, Roem. Syn. monog. I. 135 ; Kurz in Journ. As. Soc. Beng. 1873. 65), all softer parts, as well as the panicle, softly pubescent ; capsules black, almost smooth.

HAB. Var. *a.* Rather rare in the tropical forests of Chittagong and Pegu down to Tenasserim ; also Andamans ; var. *β.* frequent in the dry forests of Prome and Pegu, here entering also the upper mixed forests.—Fl. Sept.

Soymida, A. Juss.

1. *S. FEBRIFUGA*, A. Juss. in Mém. Mus. XIX. 251. t. 22. f. 26 ; Bedd. Fl. Sylv. t. 8 ; Hf. Ind. Fl. I. 567.—(*Swietenia febrifuga*, Roxb. Corom. Pl. I. t. 17. and Fl. Ind. II. 398).

HAB. Burmah (in Hb. Brandis, without locality, probably Prome).—Fl. March, Apr. ; Fr. Jul. Aug.

Cedrela, L.

Conspectus of species.

* Seeds winged at both ends. Leaflets entire.

Calyx minute, the sepals rounded, hardly $\frac{1}{3}$ lin. long; leaflets usually on long slender petiolules, *C. Toona*.

Calyx large, the sepals $1\frac{1}{2}$ lin. long, rather acute; leaflets usually shortly petioluled, .. *C. multijuga*.

* * Seeds winged only below.

Leaflets serrate or serrulate; calyx minute, *C. serrata*.

1. *C. TOONA*, Roxb. Corom. Pl. III. t. 238 and Fl. Ind. I. 635; Wight. Icon. t. 161; Brand. Fl. Sylv. 72. t. 14, Bedd. Fl. Sylv. t. 10; WA. Prod. I. 124.—(*C. febrifuga*, Bl. Bydr. 180; Miq. in Ann. Mus. Lugd. Bat. IV. 63; *C. Teysmanni*, Hort. Bog. 133; Miq. l. c.).

HAB. Rather rare in the tropical forests of the Pegu Yomah, frequent in those of Martaban; also Chittagong and Arracan.—Fl. March, Apr.; Fr. Oct. Nov.

2. *C. MULTIJUGA*, Kurz in Journ. As. Soc. Beng. 1872. 297.

HAB. Rather rare in the tropical forests of the eastern slopes of the Pegu Yomah, west of Tounghoo.—Fl. March.

3. *C. SERRATA*, Royle. Ill. Him. Pl. 144, t. 25.—(*C. serrulata*, Miq. Suppl. Fl. Sum. 508 and Ann. Mus. Lugd. Bat. IV. 64; *C. longifolia*, Wall. Cat. 1273).

HAB. Ava.

The identification of *C. serrulata*, Miq. (which is the same as Wallich's plant) with *C. serrata*, Royle, is open to future inquiry.

CHAILLETIACEÆ.

Chailletia, DC.

Conspectus of species.

× Nerves and net-venation beneath more or less conspicuous.

Cymes cluster-like and almost sessile; leaves green, cuneately narrowed into a very short petiole, *Ch. gelonioides*.

Cymes spreading, peduncled?; leaves dark-brown in a dried state, *Ch. macropetala*.

× × Nerves and net-venation beneath very faint and almost impressed.

Cymes on a peduncle 2—3 lin. long; leaves brown in a dried state, shortly petioled, .. *Ch. Helferiana*.

1. *CH. GELONIOIDES*, Bth. and Hf. Gen. pl. I. 341. and Hf. Ind. Fl. I. 570 excl. syn. Miq. (*Moacurra gelonioides*, Roxb. Fl. Ind. II. 70; DC. Prod. XV/2. 227).

HAB. Chittagong.

N. B.—*Ch. Sumatrana*, Miq. has fruits only one-third or one-fourth the size of those of *Ch. gelonioides*, not to mention other points of difference.

2. CH. MACROPETALA, Turcz. in Bull. Mosc. 1863. 611. (*longipetala*); Hf. Ind. Fl. I. 571.

HAB. Tenasserim, Mergui.

3. CH. HELFERIANA, Kurz in Journ. As. Soc. Beng. 1872. 297; Hf. Ind. Fl. I. 570.

HAB. Tenasserim, Tavoy, Moulmein, etc.

OLACINEÆ.

Conspectus of species.

Subord. I. OLACEÆ. Stamens as many or twice as many (rarely fewer) as petals and *opposite to them.*

Trib. I. EU-OLACEÆ. Stamens anisomerous, or isomerous. Ovary 2—5-celled at the base, 1-celled at the apex or completely 1-celled, the placenta central with 2—5 pendulous ovules.

* Stamens twice as many as petals, or if fewer, accompanied by staminodes.

XIMENIA. Calyx not enlarging after flowering. Stamens all perfect.

OLAX. Calyx enlarging and enclosing the fruit. Perfect stamens 3, rarely 5; staminodes 6 or fewer.

* * Stamens as many as petals. Staminodes none.

× Fruiting calyx much enlarged, adnate to the drupe.

ERYTHROPALUM. Ovary 1-celled. Tendril-bearing climbers with 3-nerved leaves.

STROMBOSIA. Ovary to near the summit 3—5-celled. Trees with penninerved leaves.

× × Calyx in fruit unchanged.

ANACOLOSA. Disk in fruit much enlarged, adnate to the drupe and resembling an engrossed adnate calyx. Petals almost. Ovary 1 or imperfectly 2-celled.

Trib. II. OPILEEÆ. Stamens isomerous. Ovary 1-celled with a single ovule. Flowers hermaphrodite.

* *Perianth dichlamydeous, i. e. consisting of calyx and corolla.*

CANSJERA. Spikes axillary, without bracts. Calyx inconspicuous, shortly 4-lobed; corolla gamopetalous. Stamens 4, alternating with as many hypogynous scales or glands.

NATSIATOPSIS. Spikes axillary, without conspicuous bracts. Calyx 4-lobed. Corolla gamopetalous. Stamens 4, free. Staminodes none.

OPILIA. Inflorescence while young conspicuously imbricate-bracted. Petals free. Filaments filiform. Staminodes 5.

* * *Perianth monochlamydeous.*

LEPIONURUS. Inflorescence while young conspicuously imbricate-bracted. Flowers 4-merous. Filaments very short, complanate.

CHAMPEREYA. Inflorescence with very deciduous minute bracts. Flowers 5-merous. Filaments slender, exerted.

Subord. II. ICACINEÆ. Stamens as many as petals and *alternating with them.*

Trib. III. EU-ICACINEÆ. Cotyledons small or dilated. Trees or erect shrubs.

* Calyx minutely toothed or lobed. Petals usually glabrous.

STEMONURUS. Anthers pendulous. Drupe without fleshy appendage.

APODYTES. Anthers attached at the back above the 2-lobed base. Ovary oblique. Drupe with a fleshy puffy sarcocarp covering only the one half of the nut.

DAPHNEPHYLLOPSIS. Anthers attached to the back. Drupe berry-like. Flowers sessile, in heads.

* * Calyx 5-cleft or the sepals distinct, imbricate.

GONOCARYUM. Flowers unisexual. Drupes dry, woody. Albumen many-lobed.

Trib. IV. PHYTOCRENEÆ. Cotyledons broadly foliaceous or thick-fleshy. Flowers dioecious. Climbers. Fruit drupaceous.

* Stamens alternating with the petals.

× Flowers in heads.

PHYTOCRENE. Filaments longer than the anthers. Albumen deeply lobed. Drupes villous or echinate.

× × Flowers in spikes racemes or panicles.

SARCOSTIGMA. Flowers interruptedly spiked; filaments longer than the anthers. Staminodes none. Stigma sessile. Albumen none.

NATSIATUM. Flowers racemose. Filaments very short, alternating with 5 staminodes. Styles 2. Albumen fleshy.

* * Stamens opposite to the petals.

JODES. Flowers cymose-panicled. Stamens 8, filaments very short. Stigma sessile. Albumen fleshy.

Genus of doubtful position.

CARDIOPTERIS. Sepals and petals imbricate. Fruit dry, winged. Milk-juiced annual twiners.

Ximenia, L.

1. X. AMERICANA, L. sp. pl. 497; Roxb. Fl. Ind. II. 252; Lamk. Ill. t. 257. f. 1—2; Bth. Fl. Austr. I. 391; Hf. Ind. Fl. I. 574.—(*X. subscandens*, Griff. Not. Dicot. 691).

HAB. Not unfrequent along the coasts of the Andamans; also Tenasserim.—Fl. March, Apr.

Olax, L.

Conspectus of species.

× Enlarged calyx in fruit membranous, dry.

Branchlets terete, like the under-surface of the leaves and the racemes, puberulous, .. *O. scandens*.

All parts also the racemes quite glabrous; branchlets angular, *O. zeylanica*.

× × Enlarged fruiting calyx coriaceous (fleshy in a fresh state).

Glabrous, the branchlets terete; flowers 4—5 lin. long, *O. imbricata*.

1. O. SCANDENS, Roxb. Corom. Pl. II. t. 102. and Fl. Ind. I. 163; Hf. Ind. Fl. 575.—(*Olax obtusa*, Bl. Bydr. 131 ?).

HAB. Rather frequent all over Burmah, from Ava and Chittagong down to Tenasserim, in all deciduous forests, ascending also the pine forests up to 3500 ft. elevation, and occurring equally abundantly in the tidal forests.—Fl. Decb.—March.

2. O. ZEYLANICA, L. sp. pl. 49; Hf. Ind. Pl. I. 576. (*O. acuminata*, Wall. Cat. 6781; Hf. Ind. Fl. I. 576; *O. sphaerocarpa*, Griff. Not. Dicot. 689).

HAB. Ava, in woods at the Mogoung river (Griff. 797) ; Khakhyen hills (J. Anderson).—Fl. March.

3. *O. IMBRICATA*, Roxb. Fl. Ind. I. 164 ; Hf. Ind. Fl. I. 575.—(*O. Merguensis*, Mast. in Hf. Ind. Fl. I. 576).

HAB. Chittagong ; Tenasserim, from Moulmain to Mergui.—Fr. Febr.

Doubtful species.

1. *O. loranthiformis*, Griff. Not. Dicot. 691. t. 645. f. 5.

HAB. Moulmein, on the coast of Madamacan (Griff.).

Erythropalum, Bl.

1. *E. SCANDENS*, Bl. Bydr. 922 ; Hf. Ind. Fl. I. 578.—(*Decastrophia inconspicua*, Griff. Not. Dicot 736. t. 613. f. 4. ; *E. populifolium*, Planch. in Ann. d. sc. nat. 4 ser. II. 260 ; Hf. Ind. Fl. I. 578).

HAB. Not unfrequent in the tropical forests of the eastern slopes of the Pegu Yomah, and from Martaban down to Tenasserim.—Fl. Apr.

Strombosia, Bl.

1. *S. JAVANICA*, Bl. Bydr. 1154, and Mus. Bot. I. 251. f. 47 ; Hf. Ind. Fl. I. 579.

HAB. Tenasserim (Helf. 818).

Anacolosa, Bl.

Conspectus of species.

Calyx and pedicels densely puberulous ; drupe scarlet, thinly velvety, *A. puberula*.

Calyx and slender pedicels glabrous, *A. Griffithii*.

As preceding, but the fruiting pedicels very thick ; drupe an inch long, glabrous, .. *A. crassipes*.

1. *A. PUBERULA*, Kurz J. A. S. B. 1872. 297 ; Hf. Ind. Fl. I. 581.

HAB. Rather frequent in the tropical forests of the Andamans.—Fl. Febr. May ; Fr. Febr.

2. *A. GRIFFITHII*, Mast. in Hf. Ind. Fl. I. 580.

HAB. Tenasserim, Mergui (Griff. 821).

Probably only a glabrous form of the preceding ; the sepals and petals are not quite glabrous.

3. *A. CRASSIPES*, (*Stemonurus ? crassipes*, Kurz in Journ. As. Soc. Beng. 1872. 298 ; *Gomphandra ? crassipes*, Mast. in Hf. Ind. Fl. I. 587).

HAB. Rare along choungs in the tropical forests of the eastern slopes of the Pegu Yomah.—Fr. CS.

Cansjera, Juss.

Conspectus of species.

× Spikes simple.

Leaves small, oval, notched or blunt, pubescent ; spikes very short, solitary, *C. parvifolia*.

Leaves acuminate, opaque ; spikes solitary or by pairs, *C. Rheedii*.

× × Spikes branched, rarely the uppermost ones almost simple.

Leaves acute, glossy above; spikes solitary, *C. zizyphifolia*.

1. *C. PARVIFOLIA*, Kurz in Journ. As. Soc. Beng. 1872, 298; Hf. Ind. Fl. 583.

HAB. Tenasserim (Helf).

2. *C. RHEEDI*, Gmel. Syst. I. 280; Wight Icon. t. 1861; DC. Prod. XIV. 519. Hf. Ind. Fl. I. 582 pp.—(*C. scandens*, Roxb. Corom. Pl. II. 1. t. 103 and Fl. Ind. I. 441).

HAB. Not unfrequent in the tropical forests of the Andamans and Tenasserim.—Fl. May.

3. *C. ZIZYPHIFOLIA*, Griff. Not. Dicot. 360. t. 537. f. 1. (*Olax?* *Sumatrana*, Miq. Suppl. Fl. Sum. 342).

HAB. Burmah (Griff. 823, most probably Tenasserim).

Natsiatopsis, Kurz.

1. *N. THUNBERGLEFOLIA*, Kurz. MS.

HAB. Ava, Khakhyen hills, Ponsee (J. Anderson).—Fl. March.

Female flowers unknown.

Opilia, Roxb.

1. *O. AMENTACEA*, Roxb. Corom. Pl. II. 31. t. 158 and Fl. Ind. II. 87; Wight Ill. t. 40; Hf. Ind. Fl. I. 583.

HAB. Not unfrequent in the mixed dry forests of the Prome District. Fl. March; Fr. Apr. May.

Lepionurus, Bl.

1. *L. SYLVESTRIS*, Bl. Bydr. 1146; Miq. Fl. Ind. Bat. I. 784.—(*L. oblongifolius*; Mast. in Hf. Ind. Fl. I. 583; *Leptonium oblongifolium*, Griff. in Macl. Calc. Journ. IV. 236 and Not. Dicot. 368. t. 536).

HAB. Ava, Khakhyen hills (J. Anderson).—Fl. May.

Champereya, Griff.

1. *CH. GRIFFITHIANA*, Planch. (*Ch. sp.* Griff. Not. Dicot. 362. t. 537. f. 3).

HAB. Not unfrequent in the tropical forests of the Andaman islands; also Upper Tenasserim.—Fl. Febr.; Fr. Apr. May.

N. B.—Wherever *Lepionurus* may be placed, *Champereya* must accompany it.

Daphniphyllopsis, Kurz.

1. *D. CAPITATA*, (*Ilex daphnephylloides*, Kurz in Journ. As. Soc. Beng. 1870. 72).

HAB. Not unfrequent in the damp hill-forests of Martaban, at 4000 to 6000 ft. elevation.—Fl. March.

An incompletely known genus, but its position in *Olacineæ* is certain. Inflorescence is exactly that of *Ilex sulcata*, while the leaves resemble those of *Daphniphyllum Himalayense*. It is nearest allied to *Mappia*.

Stemonurus, Bl.

Conspectus of species.

× All parts glabrous.

Leaves $2\frac{1}{2}$ —5 in. long; cymes leaf-opposite, the peduncle stiff and $\frac{1}{2}$ —1 in. long,
. *St. Penangianus*.

Leaves 2—3 in. long; cymes slightly puberulous, axillary and peduncled; drupes elliptically oblong, the putamen sulcate, *St. Javanicus*.

× × Younger branchlets tawny tomentose; petioles, undersurface of leaves, and inflorescence puberulous or tomentose.

Cymes peduncled, leaf-opposed, *St. tomentellus*.

1. ST. PENANGIANUS, Miers Contr. I. 90.—(*Gomphandra Penangiana*, Wall. Cat. 7204; Hf. Ind. Fl. I. 587).

HAB. Upper Tenasserim, Moulmein (Lobb) teste Masters.

2. ST. JAVANICUS, Bl. Bydr. 649; Miers. Contr. Bot I. 86.—(*Lasi-anthera Javanica*, Miq. Fl. Ind. Bat. I/1. 790; *Gomphandra affinis*, Mast. in Hf. Ind. Fl. I. 586).

HAB. Tenasserim.

3. ST. TOMENTELLUS, Kurz in Journ. As. Soc. Beng. 1872. 298.—(*Gomphandra tomentella*, Mast. in Hf. Ind. Fl. I. 587).

HAB. Burma, probably Tenasserim (Griff. 813).

Apodytes, E. Mey.

1. A. ANDAMANICA, Kurz in And. Rep. App. B. 5. and Journ. As. Soc. Beng. 1872. 298; Hf. Ind. Fl. I. 588.

HAB. Frequent in the tropical forests of the Andaman Islands.—Fl. Febr. to May; Fr. May to July.

Gonocaryum, Miq.

Conspectus of species.

Leaves opaque; drupes obtusely 4—3-angular, acute, *G. gracile*.

Leaves glossy; drupes terete, rounded at apex, *G. Griffithianum*.

1. G. GRACILE, Miq. Suppl. Fl. Sum. 343 (1860).—(*Gonocaryum ? Wallichii*, Mast. in Hf. Ind. Fl. I. 590).

HAB. Tenasserim (Helf. 817).

The drupes in this species are obtusely angular, but the seeds being all aborted, no stress can, consequently, be laid upon this character, until perfected fruits with seeds become known.

2. G. GRIFFITHIANUM (*Platea Griffithsiana*, Miers. Contr. I. 97. t. 17; *Platea Lobbiana* Miers. l. c.; *Phlebocalymna Griffithiana*, Mast. in Hf. Ind. Fl. I. 590; *Phlebocalymna Lobbiana*, Mast. l. c.).

HAB. Frequent in marshes of the tropical and swamp forests, from Southern Pegu down to Tenasserim.—Fl. Decb. to March ; Fr. R. S.

Phytocrene, Wall.

Conspectus of species.

Male flower-heads usually more tawny, tomentose, on short but very thick pedunclets, numerous in very compound racemes terminating in the young state in short thick tomentose bract-like sterile axes, *Ph. gigantea*.

Male flower-heads somewhat smaller and usually greyish, tomentose, on short but slender pedunclets, few (8—5), in simple short racemes terminating in long bract-like greyish-tomentose slender axes, *Ph. bracteata*.

1. PH. GIGANTEA, Wall. Pl. As. var. III. 11. t. 216 ; Griff. Not. Dicot. t. 490. f. 2 ; Hf. Ind. Fl. I. 591.

HAB. Not unfrequent along choungs in the tropical forests of the eastern slopes of the Pegu Yomah ; more frequent in Tenasserim.—Fl. Febr.

2. PH. BRACTEATA, Wall. Fl. As. var. III. 12 ; DC. Prod. XVII. 12 ; Hf. Ind. Fl. I. 592.

HAB. South-Tenasserim ; Mergui (Griff. 830) *teste* Baillon.

The so-called bracts of the male inflorescences in this genus are, in my opinion, only the sterile end-branchings of the partial racemes.

Sarcostigma, WA.

1. S. WALLICHII, Baill. in Adans. X. 282 ; DC. Prod. XVII. 16 ; Hf. Ind. Fl. I. 594.—(*S. edule*, Kurz in Journ. As. Soc. Beng. 1872. 298 ; Hf. Ind. Fl. I. 594.)

HAB. Frequent in the tropical forests of the Andaman islands.—Fl. Febr. ; Fr. May to June.

Masters says that this species (*S. edule*) is probably only a form of *S. Kleinii*, but in this he is mistaken, for the latter differs by quite glabrous drupes and inflorescences ; and he evidently confounds two species under this name. I would suggest to him to compare Maingay's No. 378 from Malaya (of which I have seen only leaves) with *S. Horsfieldii*.

Iodes, Bl.

Conspectus of species.

× Pedicels not woody, slender.

Leaves oblong, not cordate at the base, membranous, the petiole $\frac{1}{2}$ — $\frac{3}{4}$ in. long ; pedicels slender, about $\frac{1}{2}$ lin. long, *I. Brandisii*.

Leaves more or less oval, cordate at the base, coriaceous, the petiole 2—4 lin. long ; flowers almost sessile, *I. tomentella*.

× × Pedicels thick and woody.

Drupes orange, smooth, above an inch long, *I. Hookeriana*.

1. I. BRANDISII, Kurz in Journ. As. Soc. Beng. 1872. 298 ; Hf. Ind. Fl. I. 596.

HAB. Tenasserim, Thoungyeen (Brandis).—Fl. March.

2. I. TOMENTELLA, Miq. Fl. Ind. Bat. I/1. 796.—(*I. ovalis*, Mast. in Hf. Ind. Fl. I. 696, vix. Bl.).

HAB. Upper Tenasserim, Moulmein (Falconer).—Fl. Febr.

3. I. ? HOOKERIANA, Baill. in Adans. X 268; DC. Prod. XVII. 24; Hf. Ind. Fl. I. 596.—(*I. Thomsoniana*, Baill. l. c. 270; DC. l. c. 25; Hf. l. c.).

HAB. Chittagong (Hf. and Th.).

Fruits and habit of *Sarcostigma*. An examination of a single ovary already engrossed shewed me a solitary erect basal ovule.

Cardiopteris, Wall.

1. C. LOBATA, Wall, ap. B. Br. Pl. Jav. Rar. 246. t. 49; Hf. Ind. Fl. I. 597.—(*C. hamulosa*, Griff. Dicot. 542. t. 598. f. 1—3; *C. Javanica*, Bl. Rumph. III. 206. t. 177. f. 1. A.).

HAB. Common in all leaf-shedding forests and deserted toungyas, from Ava and Martaban down to Tenasserim.—Fr. C. S.

ILICINEÆ.

Conspectus of genera.

Subord. I. ILICEÆ. Petals present. Flowers hermaphrodite.

ILEX. Stamens 5. Ovary 4—8-celled.

Subord. II. DAPHNIPHYLLÆ. Flowers apetalous, unisexual.

DAPHNIPHYLLUM. Stamens 5—18. Ovary 2-celled.

Ilex, L.

Conspectus of species.

* *Male inflorescence cymose, the female flowers clustered or solitary.*

Leaves elongate-cuneate-lanceolate, 2—3½ in. long, beneath very opaque and brown; sepals ciliate, *I. gaultheriæfolia*.

* * *Female flowers in simple or compound umbellets or cymes.*

O Cymes head-like contracted and small, on a long compressed peduncle. Glabrous, or the branchlets pubescent, *I. Godayam*.

O O Cymes divaricately 2-cleft, on a rather short peduncle. Cymes once divaricately 2-cleft; leaves large, coriaceous; branchlets pale-coloured, .. *I. macrophylla*.

Cyme twice or thrice dichotomously branched; leaves beneath pale-coloured or glaucous; branchlets pure white; style stout, distinct, *I. cymosa*. As preceding, but stigma sessile, *I. Wallichii*.

1. I. GAULTHERIÆFOLIA, Kurz in Journ. As. Soc. Beng. 1872. 299.

HAB. Tenasserim, Mergui (Griff. 1998).

Dr. Hooker identifies this species with his *I. theæfolia*, but in this he is in error, his new species differing greatly not only in the texture and polish of the leaves, but still more so in the inflorescence, doubly

larger flowers, and very long pedicels (in my species they are only about $\frac{1}{2}$ lin. long).

2. I. GODAYAM, Coleb. in. Hf. Ind. Fl. I. 604.—(*Prinos Godayam*, Ham. in Wall. Pl. As. rar. III. 38. t. 261.)

VAR. *a.* GENUINA, shoots, peduncles, and pedicels shortly puberulous; calyx more or less pubescent or densely fringed.

VAR. *β.* SULCATA, (*I. sulcata*, Wall. Cat. 4330; Hf. Ind. Fl. I. 604), all parts quite glabrous except the puberulous pedicels; calyx usually puberulous or only minutely puberulous, the lobes sometimes ciliolate.

HAB. Var. *β.* Not unfrequent in the tropical forests from Martaban down to Tenasserim.—Fl. Febr. Apr.

3. I. MACROPHYLLA, Wall. Cat. 4331; Hf. Ind. Fl. I. 604.

HAB. ? Tenasserim (Helfer), and Mergui (Griff. 2012) *teste* Hf.

4. I. CYMOSA, Bl. Bydr. 1149; Hf. Ind. Fl. I. 605.

HAB. Tenasserim (*teste* Hf.).

5. I. WALLICHII, Hf. Ind. Fl. I. 605.

HAB. Tenasserim, Tavoy (*teste* Hf.).

Daphniphyllum, Bl.

Conspectus of species.

Calyx persistent?; pedicels about $\frac{1}{2}$ in. long, *D. majus*.

Calyx deciduous; pedicels about 1—2 lin. long, *D. Himalayense*.

1. *D. MAJUS*, Muell. Arg. in Linn. XXXIV. 76; DC. Prod. XVI/1. 2.

HAB. Upper Tenasserim, Amherst (Wall.) Fl. Febr.

2. *D. HIMALAYENSE*, Muell. Arg. in DC. Prod. XVI/1. 4.

HAB. Not unfrequent in the damp hill-forests of the Martaban hills, east of Tounghoo, at about 5000 ft. elevation.

CELASTRINEÆ.

Conspectus of species.

Subord. I. CELASTRACEÆ. Stamens inserted outside the disk. Seeds albuminous.

* Capsule or follicle dehiscent.

× Ovules from the axis of the cells. Leaves opposite.

EVONYMUS. Petals free. Disk fleshy, broad; capsules 3—5-lobed and -celled.

MICROTROPIS. Petals united at the base. Disk none or annular. Capsule 1-celled, 2-valved.

× × Ovules erect. Leaves alternate.

CELASTRUS. Ovary free. Capsules 2—4-celled, loculicidal. Seeds arillate. Flowers in panicles or racemes.

GYMNOSPORIA. Ovary confluent with the disk. Capsule 2—3-lobed and -celled. Arillus complete, incomplete or wanting. Flowers in cymes.

KURRIMIA. Ovary free, styles 2. Capsule entire or 2-lobed, 1—2-celled, follicle-like and slowly dehiscent into 1 or 2 valves. Flowers in cymes or racemes, or paniced.

* * Fruit an indehiscent drupe or berry.

ELLEODENDRON. Ovary superior, confluent with the disk; drupe containing an 1—3-celled putamen. Leaves opposite or nearly so.

SIPHONODON. Ovary half-inferior, 5-celled. Berry large, containing many pyrenes. Leaves alternate.

Subord. II. **HIPPOCRATEACEÆ.** Stamens 3, rarely 2—5, inserted within or on the disk. Albumen none. Leaves opposite.

* Fruit an indehiscent berry, 1—many-seeded. Seeds not winged.

SALACIA. Only genus. Scandent shrubs. Inflorescences axillary. Stamens 3, rarely 2 or 4, inserted within the disk.

* * Fruit capsular or samaroid, dehiscent. Seeds winged.

× Ripe carpels samaroid, 2-valved. Stamens 3, inserted within the disk. Scandent shrubs.

HIPPOCRATEA. Ripe carpels usually 3. Seeds usually winged at the lower end. Inflorescences terminal or terminal and axillary.

× × Fruit a capsule. Erect trees or shrubs. Stamens 5, inserted on the disk.

LOPHOPETALUM. Capsule 3—4-celled and -lobed, loculicidal. Seeds winged all round. Not gland-dotted.

KOKOONA. Capsule 3-celled and -lobed, loculicidal. Seed winged at the upper end only. All herbaceous parts gland-dotted.

Evonymus, L.

Conspectus of species.

Subg. 1. **EVONYMUS.** Ovules 2 in each cell.

* Flowers solitary or clustered in the axils of the leaves.

Flowers nearly 5—6 lin. across; petals fringed; capsules sharply angular, on $\frac{1}{2}$ —1 in. long peduncles; leaves glossy, entire, *E. Javanicus*.

Capsules globular, obtusely lobed, very shortly peduncled or almost sessile; leaves green, opaque, *E. calocarpus*.

* * Flowers in dichotomous cymes.

× Branchlets terete or nearly so, or somewhat compressed.

- Flowers small, usually 5-merous; petals entire; capsules angular; leaves serrulate upwards, *E. glaber*.

× × Branchlets sharply 4-cornered or almost winged.

Flowers small, in very slender cymes; capsules small, smooth, *E. Griffithii*.

Subg. 2. **GLYPTOPETALUM.** Ovules solitary in the cells.

Bark red; petals 4, greenish purple, concave-orbicular, without grooves; capsules very rough from scurfy fissures and warts, *E. sclerocarpus*.

1. *E. JAVANICUS*, Bl. Bydr. 1146; Benn. in Horsf. Pl. Jav. var. 130. t. 28; Hf. Ind. Fl. I. 607.—(*E. Bancanus*, Miq. Suppl. Fl. Sum. 513).

HAB. Tropical forests of Tenasserim, from Moulmein southwards.—Fl. March.

2. *E. CALOCARPUS*, Kurz in Journ. As. Soc. Beng. 1872. 299; Hf. Ind. Fl. I. 609.

HAB. Tenasserim (Helfer 1973).

3. *E. GLABER*, Roxb. Fl. Ind. I. 628; Hf. Ind. Fl. I. 609.—(*E. garcinioides*, Roxb. HBC.; *E. Timorensis*, Laws. in Hf. Ind. Fl. I. 610, non Zipp.).

HAB. Not unfrequent in the tropical forests of Martaban and Tenasserim, rare in those of the eastern slopes of the Pegu Yomah; also Chittagong.—Fl. March, Apr.

4. *E. GRIFFITHII*, Kurz in Journ. As. Soc. Beng. 1872. 73; Ind. Fl. I. 611.—(*Hippocratea angulata*, Griff. Not. Dicot. 473. t. 581. f. 1).

VAR. α . *GENUINA*, petioles thick, hardly $\frac{1}{4}$ lin. long or the leaves almost sessile and obsoletely serrate.

VAR. β . *DUBIA*, petioles slender, 2—3 lin. long; leaves entire or nearly so.

HAB. Var. α . Ava, on rocks at Loonkarim and Delvi Nempean on the North from Assam (Griff. 1977); var. β . not unfrequent in the damp hill-forests of the Nattoung ranges in Martaban, east of Toungoo, at 6000—7000 ft. elevation.—Fl. Apr. ?

VAR. β . will prove a distinct species, but as my specimens are in very young bud only, I am unwilling to establish the species until better material comes to hand.

5. *E. SCLEROCARPUS*, Kurz in Journ. As. Soc. Beng. 1872. 299.—(*Glyptopetalum sclerocarpum*, Laws. in Hf. Ind. Fl. I. 613).

HAB. Rather rare in the tropical forests around the Kambala toung of the central Pegu Yomah.—Fl. Fr. Febr.

Microtropis, Wall.

Conspectus of species.

× Cymes not much longer than the petiole, robust and crowdedly-flowered.

Leaves coriaceous, smooth; capsules $\frac{1}{2}$ in. long, grey, *M. garcinifolia*.

× × Cymes much longer than the petiole, lax and dichotomously branched.

Leaves smooth, glossy above; peduncle slender, 1—1 $\frac{1}{2}$ in. long, *M. bivalvis*.

Leaves coriaceous, wrinkled especially above, opaque; peduncle $\frac{1}{2}$ — $\frac{3}{4}$ in. long,
.. *M. longifolia*.

1. *M. GARCINIFOLIA*, Wall. ap. Wight Icon. t. 761.—(*Evonymus garcinifolius*, Roxb. Fl. Ind. I. 628; *M. discolor*, Wall. Cat. 4337; Hf. Ind. Fl. I. 614).

HAB. Rather frequent in the damp hill-forests of Martaban and Tenasserim, at 5000 to 7000 ft. elevation.—Fl. March.

2. *M. BIVALVIS*, Wall Cat. 4340; Hf. Ind. Fl. I. 614.—(*Celastrus bivalvis*, Jack.; Roxb. Fl. Ind. ed. 1. II. 399).

HAB. Tropical forests of Tenasserim, from Moulmein southwards.—Fl. Febr. and Sept.; Fr. Octob.

3. *M. LONGIFOLIA*, Wall. in Journ. As. Soc. Beng. 1873. 65.

HAB. Tenasserim, from Moulmein District (Dr. Brandis) down to Tavoy (Wall).—Fr. Octob.

The specimens in Brandis' herbarium have smaller and more obtuse leaves.

Celastrus, L.

Conspectus of species.

Panicles slender, terminal; capsules 3-celled with 3—6 seeds, *C. paniculatus*.
Cymes robust, forming usually axillary and terminal spurious panicles; capsule 1-celled and 1-seeded, *C. monosperma*.

1. *C. PANICULATA*, Willd. sp. pl. I. 1125; Roxb. Fl. Ind. I. 621; Wight Ill. t. 72 and Icon. t. 158; Hf. Ind. Fl. I. 617.—(*C. multiflora*, Roxb. Fl. Ind. I. 622; *C. nutans*, Roxb. l. c. 623).

VAR. *α*. *GENUINA*, all parts quite glabrous or nearly so.

VAR. *β*. *PUBESCENS*, (*C. pubescens*, Wall. Cat. 4303), leaves beneath and the petioles pubescent; panicles densely puberulous.

HAB. Not unfrequent in the leaf-shedding forests all over Pegu, especially in the drier parts; var. *β*. Pegu, Prome hills.—Fl. HS.; Fr. Sept. Octob.

2. *C. MONOSPERMA*, Roxb. Fl. Ind. I. 625; Hf. Ind. Fl. I. 618.

HAB. Ava, Khakhyen hills, Pensee (J. Anderson).—Fr. March.

Lawson doubtfully gives Pegu as a locality for *C. stylosa*, Wall., but this is very probably a mistake.

Gymnosporia, WA.

Conspectus of species.

Unarmed; leaves oblong-lanceolate to lanceolate, finely acuminate, *G. acuminata*.
Unarmed; leaves obversely lanceolate, *G. oblanceolata*.
Armed, the spines leaf- and flower-bearing; leaves obovate, blunt to almost notched, .. *G. montana*.

1. *G. ACUMINATA*, Hf. Ind. Fl. I. 619.

HAB. Ava, Khakhyen hills.—Fl. Apr.

2. *G. OBLANCEOLATA*, Laws. in Hf. Ind. Fl. I. 619.

HAB. Burmah (Griff.) *teste* Lawson.

Barely recognisable by the meagre description given.

3. *G. MONTANA*, Laws. in Hf. Ind. Fl. I. 621 excl. syn. Lamk.—(*Celastrus montanus*, Roxb. Fl. Ind. I. 620; Wight Icon. t. 382).

HAB. Pegu, without locality (Dr. Brandis), probably Prome?

Kurrimia, Wall.

1. *K. ROBUSTA*, Kurz in Journ. As. Soc. Beng. 1870. 73. (*Celastrus robustus*, Roxb. Fl. Ind. I. 626; *K. pulcherrima*, Wall. Cat. 4334, *nomen nudum*; Hf. Ind. Fl. I. 622).

HAB. Rare in the tropical forests along the eastern slopes of the Pegu Yomah, but frequent in those of Martaban and Tenasserim; also Chittagong.—Fl. Febr.; Fr. Apr. Aug.

Siphonodon, Griff.

1. *S. CELASTRINUS*, Griff. in Macl. Calc. Journ. IV. 247. t. 14; Hf. in Linn. Trans. XXII. t. 26; Hf. Ind. Fl. I. 629.

HAB. Frequent in the tropical forests of the eastern slopes of the Pegu Yomah and of Martaban.—Fl. Jan. to May.

Salacia, L.

Conspicuous of species.

* *Cymes peduncled and dichotomously branched, usually short.*

Branches terete; pedicels thick, 6—8 lin. long; sepals not ciliate; filaments very short, complanate and reflexed, *S. longifolia*.

Cymes 4 in. long! divaricate, *S. Griffithii*.

Branches marked by decurrent lines and more or less angular; pedicels about 4 lin. long, slender, arising from the globose rusty-bracteole ends of the cyme-branches; sepals fringed; filaments nearly $\frac{1}{2}$ lin. long, terete and erect, *S. tortuosa*.

* * *Flowers springing from an axillary sessile tubercle or wart.*

× Flowers large; petals about 3—4 lin. long.

Pedicels 2—3 lin. thick; leaves large, coriaceous, *S. grandiflora*.

× × Flowers minute or small, the petals less than 2 lines long.

† Leaves turning brown or dark-coloured in drying. Filaments very short and complanate.

Branchlets dark-brown, corky-lenticellate; leaves entire; sepals ciliate; ovary cells 2-ovuled, *S. verrucosa*.

Branchlets pale-coloured, sparingly lenticellate; leaves serrate; berries as large as a crab-apple, 2—3-seeded; sepals not ciliate, *S. Roxburghii*.

† † Leaves turning yellowish or pale green in drying.

O Petals clawed; filaments terete, slender.

Petals about a line long, clawed; pedicels as long or longer than the petiole; berries 1-seeded, *S. prinoides*.

O O Petals sessile; filaments very short and dilated.

Pedicels few, short, 1— $1\frac{1}{2}$ lin. long, *S. flavescens*.

Pedicels numerous, slender, longer than the petiole, *S. multiflora*.

1. *S. LONGIFOLIA*, Wall. Pl. As. rar. III. 1832. 47. t. 278, non Hf. cujus homonymum in *S. Maingayanam* est mutandum.—(*S. floribunda*, Wight Ill. 1840. I. 134; Hf. Ind. Fl. I. 629).

HAB. Tenasserim, Mergui (Griff. 885/1); Moulmein District (Falconer).—Fr. Jan.

N. B.—Lawson has a *S. Griffithii* (Hf. Ind. Fl. I. 628) to which he ascribes divaricate cymes 4 in. long, but his brief phrase does not enable me to form an idea of the plant. Can it be *S. diandra*, Miq.?

2. *S. TORTUOSA*, Griff. Not. Dicot. 471. t. 581. f. 2.

HAB. Tenasserim, from Moulmein District down to Mergui (Griff. 899).—Fl. Jan. to March.

3. *S. GRANDIFLORA*, Kurz in Journ. As. Soc. Beng. 1872. 300; Hf. Ind. Fl. I. 626.

HAB. Tenasserim (Helf. 898).

4. *S. VERRUCOSA*, Wight Ill. I. 1840. 134; Hf. Ind. Fl. I. 628.—(*S. polyantha*, Korth. Verh. Natuurk. Gesch. Bot. 1839—42. 182; *S. sp.* Griff. Not. Dicot. 471).

HAB. Frequent in the tropical forests, from Martaban, east of Tounghoo, down to Tenasserim as far as Mergui (Griff. 888).—Fl. Jan. to March; Fr. Apr.

5. *S. ROXBURGHII*, Wall. Cat. 4217; Hf. Ind. Fl. I. 627.—(*Johnia salacioides*, Roxb. Fl. Ind. I. 163; *S. membranacea*, Laws. in Hf. Ind. Fl. I. 627).

HAB. Tropical forests of Tenasserim (Helf. 896).

Lawson gives Mergui, Moulmein, and the Andamans as localities for *S. viminea*, Wall. Cat. 7267, while he omits Penang and Malacca (Griff. 900), the original localities. Without seeing Burmese specimens I hesitate to adopt the species as Burmese.

7. *S. PRINOIDES*, DC. Prod. I. 571; Griff. Not. Dicot. 470; Wight Icon. t. 321; Hf. Ind. Fl. I. 626.—(*Johnia Coromandeliana*, Roxb. Fl. Ind. I. 169; *S. latifolia*, Wall. Cat. 4222; Hf. Ind. Fl. I. 629. pp.)

HAB. Frequent in the tidal forests, all along the coast, from Chittagong and Pegu down to Tenasserim and the Andamans.—Fl. Jan.; Fr. March to June.

This is one of those species that grow under the influence of the sea as well as in the interior of India, where it recurs in the stony drier tracts.

8. *S. FLAVESCENS*, Kurz in Journ. As. Soc. Beng. 1872. 300; Hf. Ind. Fl. I. 625.

HAB. Tenasserim (Helf. 897); Tavoy.

9. *S. MULTIFLORA*, Wight Ill. I. 134; Hf. Ind. Fl. I. 627.—(*S. myrtifolia*, Griff. Not. Dicot. 470 ?)

HAB. Tenasserim, Mergui (Griff.).

I have not seen this species.

Hippocratea, L.

Conspectus of species.

× Petals $\frac{1}{2}$ —1 lin. long, imbricated in the bud.

Petals about $\frac{1}{2}$ lin. long; leaves glaucous, *H. Indica*.

Petals about a line long; leaves turning brown in drying, *H. fuscescens*.

× × Petals about 2 lin. long, valvate in the bud.

Flowers outside and inflorescence greyish puberous; carpels linear-oblong, 2—3 $\frac{1}{2}$ in. long, *H. macrantha*.

Petals inside densely greyish hairy, *H. Lobpii*.

1. *H. INDICA*, Willd. sp. pl. I. 193; Roxb. Corom. Pl. II. t. 130 and Fl. Ind. I. 165; Hf. Ind. Fl. I. 624.

HAB. Rather rare in the open forests of Martaban, east of Tounghoo; Tenasserim.—Fl. Apr.

2. *H. FUSCESCENS*, Kurz in Journ. As. Soc. Beng. 1872. 300.

HAB. Upper Tenasserim, near Moulmein (Falconer).

3. *H. MACRANTHA*, Korth. Verh. Naturk. Gesch. Bot. 187. t. 39; Miq. Fl. Ind. Bat. I/2. 599 and Ann. Mus. Lugd. Bat. IV. 153.—(*H. grandiflora*, Wall. Cat. 4213).

HAB. Tenasserim (Helf. 905).

The disk both in the Tenasserim and the Khási hill plant is quite glabrous. The species differs from *H. obtusifolia* greatly in the size and shape of the ripe carpels.

4. *H. LOBBII*, Laws. in Hf. Ind. Fl. I. 624.

HAB. Tenasserim, Moulmain (*teste* Lawson).

Lophopetalum, Wight.

Conspectus of species.

* *Petals fringedly crested or lamellate on the upper side. Disk 5-lobed.*

Flowers nearly $\frac{1}{2}$ in. in diameter; crest of petals fringed, *L. fimbriatum*.

* * *Petals naked, in a dried state often turning wrinkled or corrugate on the inner face.*

× Panicles glabrous. Disk smooth, in a dried state often conspicuously wrinkled. Leaves elliptical to ovate.

Panicles brachiate, stiff and squarrose; flowers about 3 lin. in diameter; disk wrinkled, *L. Wallichii*.

As preceding but panicles larger and slenderly branched; flowers about 2 lin. across; disk wrinkled, *L. littorale*.

Apparently the same as the preceding, but the disk said to be entirely covered with "lobulate warts," *L. celastroides*.

× × Panicles while young covered with a rusty coloured or greyish tomentum.

Leaves lanceolate to oblong-lanceolate; petiole 3—4 lin. long; flowers about 1— $\frac{1}{2}$ lin. across; disk smooth or nearly so, *L. floribundum*.

1. *L. FIMBRIATUM*, Wight Ill. I. 178; Hf. Ind. Fl. I. 615.

HAB. Lower Pegu, Pongleén (Dr. Brandis), and Martaban (Yoonzeleen, &c.) down to Tenasserim, Mergui (Griff.).—Fl. March.

2. *L. WALLICHII*, Kurz in Journ. As. Soc. Beng. 1872. 299; Hf. Ind. Fl. I. 615.

HAB. Common in the open, more especially in the eng-forests, all over Pegu and Martaban down to Tenasserim.—Fl. Jan. March; Fr. March, Apr.

3. *L. LITTORALE*, (*Kokoona littoralis*, Laws. in Hf. Ind. Fl. I. 617).

HAB. In inundated low lands of the Pazwoondoung river of Pegu;

in Upper Tenasserim apparently frequent.—Fl. Febr. March ; Fr. March, Apr.

Very close to the preceding, but differing by its smaller flowers and in the slenderness of the peduncles and pedicels, as also in its growth in lowlands inundated during rains. Lawson ascribes sublamellate petals to this species, while they are simply longitudinally corrugate in the Burmese specimens, and hence I suspect that he has made up his phrasule (for a description it cannot be called) from Malayan specimens, quite overlooking the fact that Wallich's No. 6520 all came from Burma. He also still ascribes to the genus *Lophopetalum* "rarely winged, arillate seeds" and a "fleshy albumen," all characters which are applicable to the genus if taken in the absolute negative. Wight erroneously included the *Evonymus grandiflorus* in *Lophopetalum* and drew the characters of the seeds from it: whence the confusion which I have already pointed out in Journ. As. Soc. Beng. 1870, p. 73. On account of the dotted vegetative parts and the seeds being winged at the upper end only, I now prefer keeping up the genus *Kokoona* Thw. Lawson has also a *L. celastroides* from Upper Tenasserim and Pegu, the description of which does not enlighten one much as to the characters wherein it differs from the above otherwise than by the lobulate warts of the dried disk.

4. *L. FLORIBUNDUM*, Wight Ill. I. 178 ; Hf. Ind. Fl. I. 616.—(*Hippocratea pentandra*, Griff. Not. Dicot. 472).

HAB. Tenasserim, Mergui, in dense forests and along the coast of the island Madamaca (Griff. 1977/2).—Fl. Decb.

Doubtful species.

1. *L. FILIFORME*, Laws. in Hf. Ind. Fl. I. 616.

HAB. Tenasserim, Mergui (Griff.) *teste* Lawson.

Not seen by me, but hardly belongs to this genus. The cupular disk points to *Hippocratea*, but the number of stamens is not given.

RHAMNACEÆ.

Conspectus of genera.

Trib. I. ZIZYPHÆÆ. Drupe containing a solid 1—3-celled putamen, or the fruit a capsule or indehiscent nut. Ovary superior or half-superior. Disk filling the calyx-tube.

* Ovary half-superior or superior. Fruit a nut, dry, coriaceous, 1-celled and 1-seeded, or a capsule. (*Ventilagineæ*).

VENTILAGO. Nut produced into a long terminal wing, indehiscent.

SMYTHEA. Capsule lanceolate or urn-shaped, 2-valved.

** Ovary superior. Drupe fleshy or dry, with an 1—3-celled hard putamen. (*Zizyphææ genuinæ*).

ZIZYPHUS. Leaves palmately 3—5-nerved.

BERCHEMIA. Leaves penninerved.

Trib. II. RHAMNEÆ. Fruit dry or drupaceous, containing 3 (rarely 2—4) indehiscent or 2-valved cocci. Ovary superior to inferior.

* Ovary superior or half-superior. Drupe fleshy or dry, superior. Disk fleshy, filling the calyx-tube. (*Rhamnea vera*).

SAGERETIA. Flowers in terminal panicles. Leaves opposite or nearly so.

SCUTIA. Flowers in fascicles or umbellets. Leaves opposite or nearly so.

COLUBRINA. Flowers in cymes. Leaves alternate.

* * Ovary and fruit inferior, the latter crowned by the calyx-limb. (*Gouania*).

APTERON. Styles 2. Fruit globose, not winged. Flowers clustered, in terminal panicles.

GOUANIA. Fruit dry, 3-cornered or -winged. Flowers spicate or racemose, paniced.

Ventilago, Gaertn.

Conspectus of species.

× Calyx adnate to the drupe, small and basilar.

Flowers in slender simple or branched racemes; not indistinctly puberous, the wing only 1—1½ in. long. *V. Madraspatana*.

× × Calyx adnate to the drupe for ¼—½ of its length, and forming there a prominent ring.

O Flowers and fruit more or less yellowish pubescent or tomentose.

Racemose panicles and flowers tomentose; fruits puberulous, the wing 1½—1 in. long, the calyx reaching the middle of the nut, *V. calyculata*.

O O Fruits quite glabrous, even when young.

All parts glabrous; nuts about 3 lin. in diameter, the calyx reaching the middle and forming a sharp ring there, the wing rounded at the apex, *V. leiocarpa*.

Glabrous?; nuts nearly ½ in. across, the calyx broad and flat, occupying only the basal part of the nut, the wing shortly acuminate, *V. Maingayi*.

1. *V. MADRASPATANA*, Gaertn Fruct. I. 223. t. 29; Wight Icon. t. 514; Bth. in Linn. Proc. v. 76; Hf. Ind. Fl. I. 631.

HAB. Tenasserim, Moulmein to Mergui (Griff. etc.) *teste* Bth.

2. *V. CALYCULATA*, Tul. in Ann. d. sc. nat. 4 ser. VIII. 124; Bth. in Linn. Proc. V. 76; Hf. Ind. Fl. I. 631, excl. syn. *V. macrantha*.—(*Ventilago Maderaspatana*, Roxb. Corom. Pl. I. 55. t. 76 and Fl. Ind. I. 629, non Gaertn.).

HAB. Not unfrequent in the open, especially the eng-forests, and in the dry forests of Prome, Pegu, and Martaban; also Ava; Tenasserim, *teste* Lawson.—Fl. Nov.; Fr. March, Apr.

3. *V. LEIOCARPA*, Bth. in Linn. Proc. V. 77; Hf. Ind. Fl. I. 631.

HAB. Tenasserim.

4. *V. MAINGAYI*, Laws. in Hf. Ind. Fl. I. 631. (*V. sp.* Griff. Not. Dicot. 492).

HAB. Tenasserim (Helf.); Mergui (Griff.) *teste* Lawson.

Smythea, Seem.

1. **S. CALPICARPA**, Kurz in Journ. As. Soc. Beng. 1872. 301; Hf. in Ind. Fl. I. 632.

HAB. Tenasserim (Hef. 2026/1).

Zizyphus, Juss.*Conspectus of species.*

* Flowers in axillary cymes or clusters.

O Leaves more or less tomentose or pubescent beneath. Drupes sappy, quite glabrous.

Leaves coriaceous, densely fulvous or whitish tomentose beneath, glabrous above; drupe $\frac{1}{2}$ — $\frac{3}{4}$ in. long, the putamen 2-celled; erect shrub or tree, *Z. jujuba*.

Leaves membranous, above thinly beneath densely silky pubescent; drupe the size of a pea, the putamen 1- rarely 2-celled; erect or scandent shrub, *Z. oenoplia*.

O O Leaves glabrous or sprinkled with a few hairs on the nerves beneath.

Leaves green, thin chartaceous; drupes while young tawny tomentose, adult woody, .. *Z. glabra*.

* * Cymes collected into leafy or leafless panicles. Drupes woody.

Leaves glabrous, rigidly chartaceous; drupes glabrous; climber, *Z. funiculosa*.

Leaves densely fulvous tomentose or pubescent beneath; drupes glabrous; leaf-shedding tree, *Z. rugosa*.

1. **Z. JUJUBA**, Lamk. Exc. Meth. III. 318; Wight Icon. t. 99; Roxb. Fl. Ind. I. 608; Griff. Not. Dicot. 491; Edgew. in Linn. Proc. VI. 201; Hook. Journ. Bot. I. t. 140; Bedd. Fl. Sylv. Madr. t. 149; Brand. For. Fl. 86. t. 17; Hf. Ind. Fl. I. 632.

HAB. Common in the leaf-shedding, especially the dry and savannah-forests, of Prome and Ava, less frequent in those of the other provinces; also frequently cultivated in and around villages.—Fl. Aug., Sept.; Fr. Octob. to Jan.

2. **Z. OENOPLIA**, Mill. Dict. No. 3; Roxb. Fl. Ind. I. 611; Hf. Ind. Fl. I. 634, excl. syn. *Z. albens*, Roxb.—(*Z. Napeca*, Roxb. Fl. Ind. I. 613, non L.).

VAR. α . **GLABRESCENS**, leaves green on both sides, shortly and thinly pubescent. Usually a straggling shrub.

VAR. β . **FERRUGINESCENS**, leaves tawny villous beneath; usually a lofty climber.

VAR. γ . **PEDICELLARIS** (*Z. pedicellaris*, Wall. Cat. 4243), as preceding, but cymes longer peduncled and larger, pedicels about 3 lin. long.

HAB. Common all over Burma and the adjacent islands, as well in the leaf-shedding as in the evergreen forests; var. β . is a more southern form, frequent in Martaban, Tenasserim, the Andamans, etc.; var. γ . in Prome.—Fl. Sept. Octob.; Fr. C. S.

3. *Z. GLABRA*, Roxb. Fl. Ind. I. 614.—(*Z. Horsfieldii*, Miq. Fl. Ind. Bat. I. 643; *Z. venulosa*, Wall. Cat. 4235).

HAB. Frequent in the tropical forests, all over Burmah, from Ava and Chittagong down to Tenasserim and the Andamans.—Fr. C. S.

Prof. Lawson has created not a little confusion as regards this species. Without taking the trouble of studying Roxburgh's description, he based his identification upon Wallich's No. 4242 (doubtfully marked as *Z. glabra*), which is probably a glabrescent form of *Z. rugosa* and has nothing whatever to do with Roxburgh's plant. At the same time he makes quite a mélange of *Z. funiculosa*, to which he refers not only the true *Z. glabra*, but also, apparently, *Z. subquinquenervia*, Miq., from Malacca (Maingay No. 412, a variety with smaller glabrescent drupes),—both species at once distinguishable from it by the axillary cymes.

4. *Z. FUNICULOSA*, Ham. in Wall. Cat. 4234; Hf. Ind. Fl. I. 636 pp.

HAB. Ava, Khakhyen hills.

5. *Z. RUGOSA*, Lamk. Enc. Meth. III. 319; Wight Icon. t. 339; Hf. Ind. Fl. I. 636 pp. (*Z. latifolia*, Roxb. Fl. Ind. I. 607).

HAB. Frequent in all leaf-shedding forests, more especially in the open ones, all over Burmah, from Ava and Martaban down to Tenasserim. Fl. March, Apr.; Fr. May.

Doubtful species.

1. *Z. TOMENTOSA*, Roxb. Fl. Ind. I. 611.

HAB. Chittagong, where it is used for fences.

Berchemia, Neck.

Conspectus of species.

Leaves 2—4 in. long, the petiole $\frac{3}{4}$ —1 in. long; panicle ample, terminal, . . . *B. floribunda*.
Leaves 1—1 $\frac{1}{2}$ in. long, the petiole about 3 lin. long; racemes axillary, . . . *B. polyphylla*.

1. *B. FLORIBUNDA*, Wall. Cat. 4256; Hf. Ind. Fl. I. 637.—(*Zizyphus floribunda*, Wall. in Roxb. Fl. Ind. II. 368).

HAB. Ava, Khakhyen hills (J. Anderson).

2. *B. POLYPHYLLA*, Wall. Cat. 4259; Hf. Ind. Fl. I. 638.

HAB. Ava, Taong dong (*teste* Lawson).

Sageretia, Brong.

1. *S. THEEZANS*, Brongn. in Ann. d. sc. nat. 1 ser. X. 360; Hf. Ind. Fl. I. 641. VAR. β . *DIOSPYRIFOLIA*, Laws. in Hf. l. c. 462.

HAB. Ava.—Fl. Octob.

Scutia, Comm.

1. *SC. MYRTINA*, (*Rhamnus myrtinus*, Burm. Fl. Ind. 1768. 60; *Rhamnus circumscissus*, L. f. Suppl. 1781. 152; Roxb. Fl. Ind. I. 603;

Scutia Indica, Brongn. in Ann. d. sc. nat. X. 363; Wight Ill. t. 73; Hf. Ind. Fl. I. 640; *Rhamnus lucidus*, Roxb. Fl. Ind. I. 605).

VAR. α . RETUSA, leaves retuse or blunt.

VAR. β . ACUTIFOLIA, leaves acute.

HAB. Var. β . Tenasserim, along the Attaran river.

Colubrina, L. C. Rich.

Conspectus of species.

Leaves and cymes glabrous, *C. Asiatica*.

Cymes and under surface of leaves pubescent, *C. pubescens*.

1. *C. ASIATICA*, Brongn. in Ann. d. sc. nat. 1 ser. X. 369; Wight Ill. t. 74; Hf. Ind. Fl. I. 642.—(*Ceanothus Asiaticus*, L. sp. pl. 284; Roxb. Fl. Ind. I. 615; *Rhamnus acuminatus*, Colebr. in Roxb. Fl. Ind. I. 615).

HAB. Frequent in the beach- and coast-forests along the sea-shore, from Arracan down to Tenasserim and the Andamans.—Fl. Febr.; Fr. March Apr.

2. *C. PUBESCENS*, Kurz in Journ. As. Soc. Beng. 1872. 301; Hf. Ind. Fl. I. 642.

HAB. Frequent in the open, especially the low forests, all over Pegu and Martaban; also entering the tropical forests.—Fl. March; Fr. Apr. May.

Apteron, Kurz.

1. *A. LANCEOLATUM*, Kurz in Journ. As. Soc. Beng. 1872. 301; Hf. Ind. Fl. I. 643.

HAB. Upper Tenasserim, Moulmein District (Brandis, Falconer).—Fl. Febr.

Gouania, L.

Conspectus of species.

Leaves glabrous or nearly so, crenate; racemes puberulous, glabrescent: disk glabrous,

5-horned: capsules glabrous, *G. leptostachya*.

Leaves velvety above, densely tawny or rusty pubescent beneath, entire; racemes rusty-tomentose; capsules puberulous, *G. Brandisii*.

1. *G. LEPTOSTACHYA*, DC. Prod. II. 40; Wight, Icon. t. 974; Griff. Not. Dicot. 493. t. 585. f. 2; Hf. Ind. Fl. I. 643.—(*G. tiliæfolia*, Roxb. Corom. Pl. I. t. 98. and Fl. Ind. I. 632).

HAB. Frequent in the mixed forests and in shrubberies along streams and around villages, all over Burma down to Tenasserim.—Fl. Close of R. S. Fr. C. S.

2. *G. BRANDISII*, Hassk. in Flora 1871. 280, in adnot.—(*G. integri-folia*, Kurz in Journ. As. Soc. Beng. 1870. 49, non Lamk.).

HAB. Not unfrequent in the tropical forests of Martaban and Tenasserim.—Fr. Febr. March.

This species may eventually turn out to be only an entire-leaved form of *G. Javanica*, Miq., but the flowers are still unknown.

AMPELIDEÆ.

Conspectus of species.

VITIS. Stamens free. Ovary 2-celled, with 2 ovules in each cell. Tendril-bearing climbers.

LEEA. Stamens and petals united with the disk. Ovary 3—6-celled, with a solitary ovule in each cell. Erect shrubs or trees, without tendrils.

Vitis, L.

Conspectus of species

Subg. I. VITIS (sens. extens.). Inflorescences branched in the usual way, not dilated and confluent.

§ 1. *Flowers in leaf-opposed or axillary true cymes. Flowers usually 4-merous.* (Cissus.)

O Leaves compound, from simple and pedately 3—9 or more foliolate to digitate, or if simple-leaved jointed with the petiole (1—2-foliolate).

+ Leaves pedately or pinnately foliolate, very rarely spuriously digitate.

† Style short, spreadingly 4-lobed, or the 4-lobed or 4-cleft stigma sessile.

* Style short, spreadingly 4-lobed at the apex.

Flowers often unisexual.

Leaves 3-foliolate; berries $1\frac{1}{2}$ in. in diameter; seed obovoid, grooved on the back, the groove with a linear tubercle; stem very warty..... *V. tuberculata*.

Hermaphrodite; leaves coriaceous, 3-foliolate, the leaflets very shortly petioluled, .. *V. assimilis*.

Flowers unisexual; leaves sappy membranous, 3-foliolate to pedately 5-foliolate; cymes short; seeds oblong, smooth, *V. oxyphylla*.

* * Stigma sessile, 4-lobed or cleft. Flowers often unisexual.

All parts, also the very short cyme, glabrous; leaves 3-foliolate, sappy herbaceous; pedicels short, cymulose; berries white, pea-shaped, *V. angustifolia*.

Very much as the preceding, but cymes very slender and large, puberulous; seeds half-orbicular, broadly and shallowly furrowed above with a long blunt ridge in the furrow, the sides transversely rugate, *V. bracteolata*.

Glabrous or the petioles and cyme often puberulous; leaves pedate, or the upper ones often 3-foliolate, sappy coriaceous; berries white, the size of a cherry or smaller; seeds obovoid-oblong, rugulose, broadly and shallowly furrowed on the back, .. *V. lanceolaria*.

Glabrous; leaves pedate, herbaceous-fleshy; pedicels 2—3 lin. long, umbellulate; berries black, the size of a pea, *V. serrulata*.

Very much as the preceding, but young shoots and petioles rusty hirsute; leaves spuriously digitate, *V. obtecta*.

† † Style simple, entire.

* Leaves all 3-foliolate.

Glabrous; cymes leaf-opposed, glabrous; leaves glaucous beneath, ... *V. semicordata*.

All parts shortly puberulous rarely glabrous; cymes axillary or on axillary shoots, puberulous, *V. trifolia*.

* * Leaves pedate.

× Cymes leaf-opposed and spuriously axillary, *i. e.* the cyme terminating an axillary leafy or leafless shoot.

All parts densely puberulous or pubescent, *V. Teysmanni*.

All parts glabrous; leaves sparingly pubescent along the nerves beneath, .. *V. Japonica*.

× × Cymes truly axillary, long-peduncled.

Leaflets cuneate-obovate, rather blunt or acute, slightly pubescent along the nerves beneath; seeds triangular with sharp margins, muricate on the back, .. *V. tenuifolia*.

All parts pubescent to almost glabrous; leaflets finely acuminate; seeds hemispherical, smooth, *V. pedata*.

+ + Leaves truly digitate.

All parts puberulous; cymes axillary and terminal on axillary shoots; leaflets $1\frac{1}{2}$ —2 in. long; style simple, *V. auriculata*.

Leaves glabrous; leaflets 4—6 in. long, fleshy herbaceous; cymes puberulous; berries globose, style simple, bark red, *V. erythroclada*.

Leaves glabrous: leaflets 4—6 in. long, coriaceous; cymes almost sessile, very slenderly branched, puberulous; flowers minute, dioecious; stigma peltately 4-lobed, almost sessile; seeds curved-oblong, *V. campylocarpa*.

O O Leaves simple or very rarely (in *V. Anamallayana**) the uppermost ones 3-foliolate. Cymes leaf-opposite (except in *V. Wallichii*).

× Branches and branchlets cornered, sometimes almost winged and fleshy.

Branchlets very fleshy, 4-cornered, jointed; leaves small, fleshy, bluntish crenate; cymes simple, *V. quadrangularis*.

Branchlets bluntish 5-angular, thick and glossy; leaves remotely bristly toothed, long-petioled, *V. pentagona*.

Branchlets sharply 6-cornered; leaves bristly serrate, herbaceous; cymes compound, peduncled or sessile; seeds obliquely obovate, transversely wrinkled on the faces, .. *V. discolor*.

As preceding; leaves shorter petioled, while young appressed hairy on the nerves beneath; seeds smooth, obovate, *V. costata*.

× × Branches and branchlets terete or nearly so.

† Cymes axillary; branchlets angular?

Leaves slightly 3-lobed, glabrous, sappy membranous, large; seeds globose, smooth, .. *V. Wallichii*.

† † Cymes leaf-opposed.

Branchlets terete, whitish pruinous; all parts glabrous; seeds smooth, *V. repens*.

All parts, especially while young, rusty or tawny tomentose or pubescent, more or less

* This species is so near to *V. repens* that I should not wonder if it were to turn out to be only an abnormal state of it.

glabrescent; leaves sharply acuminate, never lobed; seeds obovate, shallowly lacunose, *V. adnata*.

All younger parts rusty tomentose or pubescent, glabrescent; leaves large, often somewhat 3-lobed, bluntish acuminate, deciduous; seeds obovate, smooth, .. *V. Linnæi*.

§ 2. *Inflorescence a modification of the tendrils, cymose-panicled, racemose or spiked, or more usually the one or both tendril-branches transformed into a panicle. Flowers 4- or more usually 5-merous. (Eu-Vitis.)*

* Flowers pedicelled, in loose or contracted panicles.

† Seeds 2—4 lin. long, shallowly grooved and more or less distinctly radiately furrowed on the back.

× Glabrous or nearly so.

Cymose panicles ample, glabrous, with or without tendrils; pedicels thick, nearly a line long; leaves 3—5-lobed, the lobes usually acute, *V. latifolia*.

× × All parts more or less woolly-tomentose.

Branchlets, peduncles and usually the petioles covered with a woolly tomentum intermixed with black spreading stiff hairs; leaves almost glabrous, *V. barbata*.

Branchlets, etc. woolly without black hairs; leaves lobed to palmately lobed; panicles usually tendril-bearing, short and rather compact; pedicels very short and thick, .. *V. tomentosa*.

† † Seeds about a line long, longitudinally furrowed on the back, almost smooth, glossy-black.

Branchlets, etc., woolly, without black hairs; leaves tawny woolly beneath, slightly lobed; panicles usually tendril-bearing, woolly, large and lax; pedicels very slender, $1\frac{1}{2}$ lin. long, *V. lanata*.

* * Flowers sessile, in spikes, the spikes forming elongate panicles.

Young parts thinly and fugaceously woolly; leaves pedately 5—7-foliolate, glabrous except on the nerves beneath; spikes in very slender panicles, *V. Helferii*.

Quite glabrous; leaves digitately foliolate, glaucous green; spikes puberulous, forming $1\frac{1}{2}$ —2 ft. long stout panicles, *V. polystachya*.

Subg. II. PTERISANTHES, Bl. Rachis of inflorescence leafy expanded and fleshy-membranous, the flowers sessile, unisexual.

Glabrous; leaves simple; a very slender twiner, *V. polita*.

1. *V. TUBERCULATA*, Laws. in *Hf. Ind. Fl. I.* 656.

HAB. Pegu (*teste* Lawson).

I have not seen this species, and I suspect that it is only a large-fruited, 3-foliolate form of *V. lanceolaria*.

2. *V. ASSIMILIS*, Kurz in *Journ. As. Soc. Beng.* 1872. 302.—(*V. lanceolaria* var. 2, *assimilis*, Laws. in *Hf. Ind. Fl. I.* 660).

HAB. Not rare in the drier hill-forests of the Martaban hills, east of Tounghoo, at 3—4000 ft. elevation.—Fl. March.

3. *V. OXYPHYLLA*, Wall. *Cat.* 6035.

HAB. Frequent in the tropical forests of the eastern slopes of the Pegu Yomah and the Martaban hills, east of Tounghoo.—Fl. March.

4. *V. LANCEOLARIA*, Wall. ap. *WA. Prod. I.* 128: *Wight Icon. t.* 177; *Hf. Ind. Fl. I.* 660, excl. syn. *C. feminea*; *Miq. Ann. Mus. Lugd.*

Bat. I. 78.—(*Cissus lanceolaria*, Roxb. in Wall. Fl. Ind. I. 430; *V. muricata*, WA. Prod. I. 128; Wight Icon. t. 740).

VAR. *a.* LANCEOLARIA, cymes loose and ample, densely puberulous, the pedicels longer and slender; petioles and petiolules puberulous (*Cissus lanceolaria*, Roxb. l. c.; *V. Hookeri*, Laws. in Hf. Ind. Fl. I. 661?)

VAR. *β.* TUBERCULATA (*Cissus tuberculata*, Bl. Bydr. 189), cymes short and often somewhat compact, less puberulous or glabrous, the pedicels usually shorter and thicker; petioles, &c., all glabrous; berries and seeds usually smaller.

HAB. Both varieties, but more so var. *β.*, common in the tropical forests all over Martaban down to Tenasserim and the Andamans; also along the eastern slopes of the Pegu Yomah; Chittagong.—Fl. Febr. March; Fr. Apr. May.

VAR. *a.* is in my opinion the true Roxburghian plant, while var. *β.* is Blume's *Cissus tuberculata*.

5. *V. SERRULATA*, Wall. ap. Miq. Ann. Mus. Lugd. Bat. I. 77. (*Cissus serrulata*, Roxb. Fl. Ind. 1820. I. 114; *Cissus capriolata*, Royle Ill. Him. Pl. t. 26; *V. capriolata*, Don. Prod. Nep. 188; Hf. Ind. Fl. I. 659).

VAR. *a.* CAPRIOLATA, all parts quite glabrous.

VAR. *β.* SUBOBTECTA, branches and petioles rusty-pubescent like those of *V. obtecta*, and forming a transition to it, the leaves partially becoming digitate.

HAB. Frequent along mountain-streams in the tropical forests of Martaban, up to 3000 ft. elevation; Ava, Khakhyen hills; Chittagong; var. *β.* Ava, Khakhyen hills.—Fr. Febr. March.

6. *V. OBTECTA*, Wall. Cat. 6026; Hf. Ind. Fl. I. 657.

HAB. Ava, Khakhyen hills (J. Anderson).

7. *V. SEMICORDATA*, Wall. in Roxb. Fl. Ind. II. 1824. 481.—(*V. Himalayana*, Brand. For. Fl. 100; Hf. Ind. Fl. I. 655).

VAR. *a.* SEMICORDATA, Laws. in Hf. Ind. Fl. I. 656.—(*V. semicordata*, Wall. l. c.) young parts, inflorescence, and leaflets beneath, shortly and sparingly hairy.

VAR. *β.* HIMALAYANA, (*V. Himalayana*, Brand. l. c.; *V. Neilgherrensis*, Wight Icon. t. 965; *Ampelopsis Himalayana*, Royle Ill. Him. Pl. 149), all parts quite glabrous, leaflets glaucous beneath.

HAB. Var. *β.* in the drier hill-forests of the Martaban hills, east of Tounghoo, at about 3000 ft. elevation.—Fl. March.

8. *V. TRIFOLIA*, L. sp. pl. 293; Bth. Fl. Austr. I. 449.—(*Cissus carnosa*, Lamk. Diet. I. 31; Roxb. Fl. Ind. I. 409; *V. carnosa*, WA. Prod. I. 127; Wight Icon. t. 171; Hf. Ind. Fl. I. 654).

VAR. *a.* GENUINA, all parts shortly greyish pubescent.

VAR. β . GLABRATA, all parts glabrous or nearly so.

HAB. Rather frequent all over Burma, especially in rubbishy places, in hedges, and shrubberies, becoming a powerful climber in the forests.—Fl. R. S.

I follow Miquel in adopting Linné's oldest name, which is evidently given in allusion to the trefoil (*Trifolium*).

9. V. TEYSMANNI, Miq. in Ann. Mus. Lugd. Bat. I. 82.—(*Cissus Teysmanni*, Miq. Suppl. Fl. Sumatr. 516; *V. mollis*, Wall. Cat. 6025; Hf. Ind. Fl. I. 660).

HAB. Chittagong (*teste* Lawson).

10. V. JAPONICA, Thbg. Fl. Jap. 104.—(*Cissus Japonica*, DC. Prod. I. 632; *Cissus leucocarpa*, Bl. Bydr. 189; Miq. Fl. Ind. Bat. I/2. 663; *V. cymosa*, Roxb. in Wall. Cat. 6017).

HAB. Frequent along mountain-streams and on moist rocks in the tropical forests of the Pegu Yomah, and from Martaban down to Tenasserim; also Ava, Taongdong.—Fl. R. S.; Fr. Jan. Febr.

11. V. TENUIFOLIA, WA. Prod. I. 129; Hf. Ind. Fl. I. 660 in part.

HAB. In the mixed forests of the Pegu Yomah and Arracan; also in bamboo-jungles of the Andamans.—Fl. May, June.

Possibly only a more luxuriant form of the preceding species, with more obtuse leaflets and truly axillary cymes.

12. V. PEDATA, Wall. ap. WA. Prod. I. 128; Hf. Ind. Fl. I. 661. (*Cissus pedata*, Lamk. Dict. I. 31; Roxb. Fl. Ind. I. 413).

VAR. α . GENUINA, leaves pedately foliolate, pubescent.

VAR. β . GLABRATA, as preceding, but pretty glabrous.

HAB. Var. α . frequent in leaf-shedding forests and more especially in hedges and shrubberies of the cultivated alluvial plains; var. β . in tropical forests of the Andamans.—Fl. Begin of R. S.

13. V. AURICULATA, Wall. ap. WA. Prod. I. 129; Wight Icon. t. 145; Hf. Ind. Fl. I. 658.—(*Cissus auriculata*, Roxb. Fl. Ind. I. 411).

HAB. In the mixed forests of the Pegu Yomah; Chittagong.—Fl. Begin of R. S.

14. V. ERYTHROCLADA, Kurz in Journ. As. Soc. Beng. 2872. 301.

HAB. Not unfrequent in the tropical and other forests along streams of the Pegu Yomah and Martaban east of Tounghoo.—Fl. March.

Amongst the digitate species, this comes nearest to *V. saponaria*, Seem.

15. V. CAMPYLOCARPA, Kurz in Journ. As. Soc. Beng. 1872. 302; Hf. Ind. Fl. I. 657.—(*Cissus feminea*, Roxb. Fl. Ind. I. 410?; *Panax micranthum*, Wall. Cat. 4938).

HAB. In the tropical forests of the slopes on eastern face of Kambala toung, Pegu Yomah, at 1000—2000 ft. elevation; Ava, Taong Dong (Wall.)—Fl. Nov.; Fr. March.

Diceious, remarkable for its minute flowers, and in this respect resembling *V. pubiflora*, Miq. (syn. *V. peduncularis*, Lawson). Lawson says that it has no tendrils, but in this he is mistaken. I believe it to be Roxburgh's *C. feminea*, but not having seen the female flowers, I hesitate to pronounce its identity with that species. Lawson confidently reduces *C. feminea* to a synonym of *V. lanceolaria*, but the digitate leaves alone forbid a comparison with it.

16. *V. QUADRANGULARIS*, Wall. ap. WA. Prod. I. 125; Wight Icon. t. 51; Hf. Ind. Fl. I. 645.—(*Cissus quadrangularis*, L. Mant. 39; Roxb. Fl. Ind. I. 407).

HAB. Frequent in wild shrubby and waste places and in the dry forests of the Prome district; also Ava.—Fl. Nov.

17. *V. PENTAGONA*, Voigt Cat. Hort. Calc. 28; Kurz in Journ. As. Soc. Beng. 1870. 74; Hf. Ind. Fl. I. 646.—(*Cissus pentagona*, Roxb. Fl. Ind. I. 408).

HAB. Not unfrequent in the tropical forests of the eastern slopes of the Pegu Yomah, and from Chittagong and Arracan down to the Andamans.—Fl. Octob.; Fr. Apr. May.

In Journ. As. Soc. *l. c.*, I stated that *Cissus hastata*, Miq. (= *V. hastata*, Miq. Ann. Mus. Lugd. Bat. 1863. I. 85., a species which Lawson 12 years later rechristens *V. sagittifolia*, Laws. in Hf. Ind. Fl. 1875. I. 645) was identical with *V. glaberrima*, Wall. This is an error, which arose from my having solely consulted the Wallichian specimens of *V. glaberrima*, which all happen to be *V. hastata*.

18. *V. DISCOLOR*, Dalz. in Hook. Kew. Misc. II. 39; Miq. Ann. Mus. Lugd. Bat. I. 86; Hf. Ind. Fl. I. 647, excl. syn. *V. costata*.—(*Cissus discolor*, Bl. Bydr. 281; Bot. Mag. t. 4763; *Cissus velutinus*, Linden in Bot. Mag. t. 5207).

VAR. *a.* *DISCOLOR*, leaves usually spotted, purplish beneath, on very long petioles (at least the lower ones); cymes peduncled.

VAR. *β.* *SESSILIS*, Miq. in Ann. Mus. Lugd. Bat. I. 86, cymes sessile and umbelately branched already from the base.

HAB. Var. *a.* frequent in the tropical forests and moister bamboo-jungles, from Arracan, the Pegu Yomah, and Martaban down to Tenasserim and the Andamans; var. *β.* in the Martaban hills, east of Tounghoo.—Fl. R. S.; Fr. C. S.

19. *V. COSTATA*, Wall. Cat. 6011.

HAB. Not unfrequent in the open and the mixed forests of Pegu and Arracan; also Martaban.—Fr. H. S.

20. *V. WALLICHII*, Kurz in Journ. As. Soc. Beng. 1872. 302, non DC. (*Leeu cordata*, Wall. Cat. 6819.)

HAB. Ava, Irrawaddi valley at Meaong.

Very near to *V. pallida*, WA., as Lawson has pointed out, but the axillary cymes distinguish it from that species.

21. *V. REPENS*, WA. Prod. I. 125; Hf. Ind. Fl. I. 646.—(*Cissus repens*, Lamk. Dict. I. 31; DC. Prod. I. 628; Rheed. Hort. Malab. VII. t. 48; *V. glauca*, WA. Prod. I. 126; *Cissus glauca*, Roxb. Fl. Ind. I. 406; DC. Prod. I. 628; *Cissus glauca*, Roxb. Fl. Ind. I. 406; *Cissus Blumeana*, Steud. Nomencl.; Miq. Fl. Ind. Bat. I/2. 605; *Cissus cerifera*, T. et B. in Natuurk. Tydsch. Ned. Ind. XXIV. 324).

HAB. Frequent as well in the tropical as in the moister mixed forests, all over Burma, from Chittagong and Ava down to Tenasserim and the Andamans.—Fl. R. S.; Fr. C. S.

22. *V. ADNATA*, Wall. ap. WA. Prod. I. 126; Wight Icon. t. 144; Hf. Ind. Fl. I. 649.—(*Cissus adnata*, Roxb. Fl. Ind. I. 405).

VAR. *α*. GLABRIOR, Miq. in Ann. Mus. Lugd. Bat. I. 87, all parts more glabrous, leaves only along the nerves beneath pubescent.

VAR. *β*. COMMUNIS, all parts more or less rusty tomentose; leaves above glabrous or puberulous, beneath wholly or only along the nerves tomentose.

HAB. Var. *α*. rarely in the hill-toungyas of the Martaban hills, at 3000—4000 ft. elevation; var. *β*. frequent in all leaf-shedding forests and in shrubberies and village-bushes, more especially along choungs, all over Burma and adjacent provinces.—Fl. Close of R. S.; Fr. H. S.

23. *V. LINNÆI*, Kurz, non Wall.*—(*Cissus vitiginea*, L. sp. pl. 117; Roxb. Fl. Ind. I. 406; *V. repanda*, WA. Prod. I. 125; Hf. Ind. Fl. I. 648).

HAB. Frequent as well in the mixed and open forests as also in shrubberies and grass jungles, all over Burma and adjacent provinces down to Tenasserim.—Fl. H. S. and Close of R. S.; Fr. C. S.

Lawson identifies Roxburgh's *Cissus vitiginea* with *V. lanata*, but he has never formed a clear conception of the difference between the inflorescence of the *Vitis*-section and that of the *Cissus*-section: hence the error.

24. *V. LATIFOLIA*, Roxb. Fl. Ind. I. 661; WA. Prod. I. 130; Hf. Ind. Fl. I. 652.

HAB. Frequent in the savannahs and savannah jungles, also in shrubberies and village woods, but rather rare in the leaf-shedding forests, all over the Pegu plains, especially in the Sittang valley; also Andamans, in forests.—Fl. Apr. May.

N. B.—*V. vinifera*, L. is often seen cultivated by Europeans, and is said to bear good grapes in Ava.

* Whose name has to be changed into *Vitis angulata* (*Cissus angulata*, Lamk.). Mr. C. B. Clarke informs me, that my *Vitis spectabilis* is not a climber, but a perfectly erect perennial about 2 ft. high, nearly simple, without tendrils. It grows in the Sikkim Terai only.

25. *V. BARBATA*, Wall. in Roxb. Fl. Ind. II. 478; Hf. Ind. Fl. I. 651.

VAR. *α. GENUINA*, leaves only thinly lanate beneath, black hairs numerous and conspicuous.

VAR. *β. JENKINSII*, leaves entire or lobed, their undersurface as well as the stems densely tawny or rusty woolly-tomentose, black hairs very sparingly interspersed among the tomentum.

HAB. Frequent in the low and lower mixed forests, all over Ava and Martaban down to Tenasserim; var. *β.* Ava, Taong Dong (Wall. Cat. 5994 B.).—Fl. Apr. May.

26. *V. TOMENTOSA*, Heyne in Roth. Nov. sp. 157; DC. Prod. I. 634; WA. Prod. I. 130; Wight Ill. I. t. 57; Hf. Ind. Fl. I. 650.

HAB. In deserted toungyas of the Martaban hills, east of Toungwoo, at 3—4000 ft. elevation.—Fl. Fr. March.

27. *V. LANATA*, Roxb. Fl. Ind. I. 660; WA. Prodr. I. 131; Hf. Ind. Fl. I. 651, excl. syn. *C. vitiginea*, Roxb.

HAB. Not unfrequent in deserted toungyas of Martaban and Tenasserim; also Ava and Chittagong.—Fl. Fr. Febr. March.

28. *V. HELFERI*, Laws. in Hf. Ind. Fl. I. 662.

HAB. Tenasserim (Helf. 1341).

29. *V. POLYSTACHYA*, Wall. Cat. 6028; Hf. Ind. Fl. I. 662.

HAB. Tenasserim or Andaman islands, *teste* Lawson.

30. *V. POLITA*, Miq. in Ann. Mus. Lugd. Bat. I. 95; Hf. Ind. Fl. I. 663.

HAB. Tenasserim, Moulmain (Lobb), *teste* Lawson.

Doubtful species.

1. *V. dubia*, Laws. in Hf. Ind. Fl. I. 661.

HAB. Chittagong? *teste* Lawson.

Not recognisable from the description alone, the more so as Lawson's arrangement, or I should rather call it disarrangement, of the species of *Vitis* is based upon purely technical and more or less variable characters, without reference to natural affinity. Should it really be *Vitis* No. 41 of Hf. and Th. Herb. Ind. orient., as I strongly suspect, it will be a pedately foliolate form of *V. oxyphylla*, Wall.

Leea, L.

Conspectus of species.

× Leaves ample, simple or rarely 3-foliate.

Leaves simple, large, very glaucous and shortly puberulous beneath; lobes of the staminal tube entire; shrubby, *L. macrophylla*.

Leaves simple and pinnately 3-foliate, hardly glaucescent but minutely puberulous beneath; lobes of the staminal tube notched; shrubby, *L. latifolia*.

× × Leaves from simply pinnate to decompose.

O All parts (except the inflorescence in a few species) glabrous.

† Inflorescence with persistent and conspicuous bracts and bractlets.

Slender treelet; flowers sessile or nearly so, crowded, greenish-white, . . . *L. compactiflora*.

† † Bracts and bractlets minute, usually already dropped before the flower-buds are properly developed.

* Flowers coriaceous. Flowers greenish-white or green with a purplish hue.

Leaves more or less glaucous, usually linear or lanceolate; lobes of the staminal tube erect, notched; seeds smooth and rounded on the back; undershrub, . . . *L. parallela*.

Leaves dark-green, glossy; lobes of staminal tube erect, notched; seeds even and convex on the back; a tree, *L. sambucina*.

Leaves dark-green, glossy; lobes of staminal tube reflexed, acuminate; seeds tubercled-keeled, the edges tubercled-ribbed; a large shrub, *L. gigantea*.

* * Leaves more or less membranous. Flowers red, orange, or scarlet.

Leaflets 6—8 in. long; inflorescence rusty-tomentose; undershrub, *L. laeta*.

Leaflets only 2½—4 in. long; inflorescence glabrous or nearly so, undershrub, *L. coccinea*.

O O More or less pubescent or stiff-hairy, at least the nerves beneath.

† Leaves usually simply pinnate.

Leaflets coarsely serrate, acute, roughish pubescent along the nerves beneath; nerves all parallel; petiolules thick and short; stems, petioles, and peduncles curled-winged; bracts and bractlets long, lanceolate-subulate; shrubby, *L. crispata*.

Dwarf, all parts robust and densely pubescent or almost tomentose; petioles and petiolules terete; cymes tomentose; bracts minute; undershrub, *L. pumila*.

† † Leaves usually 2- or 3-pinnate.

Leaflets coarsely serrate, acuminate, roughish pubescent on the parallel nerves beneath; stems and petioles terete or nearly so; peduncle compressed-cornered; bracts and bractlets small, linear-lanceolate; flowers greenish-white; shrubby, . . . *L. aspera*.

All parts stiff-pubescent; leaflets membranous, stiffly pubescent, beneath densely gland-dotted; petioles, &c., all terete; cymes stiff, pubescent; bracts large, broadly ovate, blunt; undershrub, *L. æquata*.

Almost glabrous or greyish puberulous; leaves 2—3-pinnate; leaflets puberulous or glabrous, not gland-dotted beneath; bracts and bractlets none; shrubby, *L. robusta*.

Stems, petioles, &c., quite glabrous; leaflets small, sprinkled with white stiff hairs; bracts or bractlets none; undershrub, *L. rubra*.

1. *L. MACROPHYLLA*, Roxb. Fl. Ind. I. 653 (non DC.), Wight Icon. t. 1154? (*L. simplicifolia*, Griff. Not. Dicot. 697. t. 645. f. 1?)

VAR. α. *GENUINA*, leaves larger and broader, usually somewhat lobed, glaucous and puberulous beneath.

VAR. β. *OXYPHYLLA*, leaves ovate to ovate-oblong, acuminate, less glaucous beneath or one-coloured, glabrous.

HAB. Var. β. frequent in the mixed forests, especially the upper ones, of Pegu and Martaban.—Fr. C. S.

2. *L. LATIFOLIA*, Wall. Cat. 6821.

HAB. Prome hills.

3. *L. PARALLELA*, Wall. Cat. 6828; Hf. Ind. Fl. I. 666.

VAR. *a.* GENUINA, leaves usually pinnate or occasionally bipinnate, leaflets oblong or oblong-lanceolate, more glaucous; calyx-lobes rotundate.

VAR. *β.* ANGUSTIFOLIA, (*L. angustifolia*, Laws. in Hf. Ind. Fl. I. 665), leaves usually 2—3-pinnate, leaflets narrow-linear to linear, very acuminate, calyx-lobes in fruit obtuse, but not rotundate.

HAB. Var. *a.* Ava, Irrawaddi valley; var. *β.* frequent in the mixed forests and grass jungles of Pegu, especially the Irrawaddi zone.—Fr. C. S.

4. *L. SAMBUCINA*, Willd. sp. pl. I. 1177; DC. Prod. I. 653; Roxb. Fl. Ind. I. 657; Griff. Not. Dicot. 598. t. 644. fig. 1; Rumph. Herb. Amb. IV. t. 45.—(*L. staphylea*, Roxb. Fl. Ind. I. 636; WA. Prod. I. 132; Wight Ill. t. 58. and Icon. t. 78; *L. ottilis*, DC. Prod. I. 636).

HAB. Frequent in the tropical forests of the eastern slopes of the Pegu Yomah, Arracan, and Martaban down to Tenasserim and the Andamans. Fl. March; Fr. May.

Leea sambucina, of the 'Flora of India' (not of authors), is a mélange of species, which Lawson explains, *more Kewensi*, by saying that there are transitional conditions so numerous that the species reduced by him cannot be maintained.

5. *L. GIGANTEA*, Griff. Not. Dicot. 697. t. 645. f. 3; Kurz in Journ. As. Soc. Beng. 1873. 65.

HAB. Tenasserim, from Moulmein down to Tavoy.—Fl. Aug. Octob.; Fr. Febr. March.

6. *L. COMPACTIFLORA*, Kurz in Journ. As. Soc. Beng. 1873. 65.

HAB. Rather rare in the drier hill-forests of the Martaban hills, east of Tounghoo, at about 3000 ft. elevation.—Fl. Apr.

7. *L. LETA*, Wall. Cat. 6831; Kurz in Journ. As. Soc. Beng. 1873. 65.

HAB. Ava (Wall.); frequent in the tropical forests of South Andaman.—Fl. June.

Very likely only a luxuriant form of the following species.

8. *L. COCCINEA*, Planch. in Hort. Donat. 6; Bot. Mag. t. 5299.

HAB. Not uncommon in the savannahs and savannah-forests of Pegu, rarely in the diluvial forests of Martaban.—Fl. May June; Fr. Jan.

9. *L. CRISPA*, L. Mant. 124; Roxb. Fl. Ind. I. 654; Hf. Ind. Fl. I. 665.—(*L. pinnata*, Andr. Bot. Repos. V. t. 355).

HAB. Frequent in the low and mixed forests of Pegu and Chittagong.

10. *L. PUMILA*, Kurz in Journ. As. Soc. Beng. 1872. 302; Hf. Ind. Fl. I. 666.

HAB. Not unfrequent in the eng and low forests of Pegu and Martaban.—Fl. probably May, June.

11. *L. ASPERA*, Wall. in Roxb. Fl. Ind. II. 468; Hf. Ind. Fl. I. 665.

HAB. Common in the mixed forests, especially in the upper ones, and in savannahs, all over Pegu.—Fr. Febr.

12. *L. ÆQUATA*, L. Mant. 124; Miq. in Ann. Mus. Lugd. Bat. I. 98.—(*L. hirta*, Hornem. Hort. Hafn. I. 231; Roxb. Fl. Ind. I. 656; Hf. Ind. Fl. I. 668).

HAB. Not unfrequent in the tropical forests of Martaban and Tenasserim, also Andamans.—Fl. June.

13. *L. ROBUSTA*, Roxb. Fl. Ind. I. 655, non Laws.—(*L. aspera*, Wall. Cat. 6825; *L. diffusa*, Laws. in Hf. Ind. Fl. I. 667).

HAB. Not unfrequent in savannahs and in open grassy places of the forests of Pegu and Arracan.—Fl. Octob.; Fr. C. S.

N. B.—*L. robusta*, Laws. non Roxb. = *L. Sundaica*, Miq.

14. *L. RUBRA*, Bl. Bydr. 197; Miq. Fl. Ind. Bat. 1/2. 611 and Ann. Mus. Lugd. Bat. I. 96.

HAB. Tenasserim, Attaran (Dr. Brandis).

N. B.—*L. sanguinea*, Kurz in Journ. As. Soc. Beng. 1873. 66 (not of Wall.) is *L. alata*, Edg. It is not a Burmese species, and the locality Ava should be referred to *L. laeta*.

SAPINDACEÆ.

A. Seeds with albumen. Stipules present.

Trib. I. STAPHYLEÆ. Flowers regular. Stamens inserted outside the disk. Leaves opposite.

TURPINIA. Ovary 3-celled. Fruit entire, indehiscent. Leaves pinnate, or rarely simple.

B. Seeds without albumen. Stipules none.

a. *Stamens inserted outside or on the disk. Flowers regular.*

Trib. II. DODONÆÆ. Stamens inserted outside the disk. Capsule septicidally dehiscent. Leaves alternate.

DODONÆA. Sepals valvate. Petals none. Ovules by pairs. Leaves usually simple.

Trib. III. ACERINEÆ. Stamens inserted on the disk. Samaras indehiscent. Leaves opposite.

ACER. Petals none or present. Disk annular. Samaras 2. Leaves simple or palmately lobed.

b. *Stamens inserted inside the disk, sometimes unilateral.*

Trib. IV. SAPINDEÆ. Leaves alternate, or rarely (in *Æsculus*) opposite. Flowers regular or irregular.

* *Fruit or fruit-lobes indehiscent, drupaceous, fleshy or rarely corticate or crustaceous.*

× Fruit entire, 1—4-celled.

O No petals. Flowers polygamously dioecious.

SCHLEICHERA. Calyx small, valvate or nearly so. Disk unilateral. Seeds arillate. Leaves abruptly pinnate.

O O Petals present, furnished with scales. Flowers polygamously monœcious.

LEPISANTHES. Flowers regular. Disk regularly annular. Leaves pinnate.

HEMIGYROSA. Flowers irregular. Disk unilateral, cushion-like. Leaves pinnate.

× × Fruit divided deeply or to the base into 3—2 lobes, the lobes often solitary by abortion of the others.

O Flowers irregular. Arillus none.

† Leaves pinnate. Trees.

DITTELASMA. Fruit deeply 1—3-lobed, the lobes drupaceous, globose. Testa bony. Embryo curved. Disk half crescent-shaped.

ERIOGLOSSUM. Fruit to the base 1—3-lobed, the lobes oblong. Testa membranous. Embryo straight. Disk unilateral.

† † Leaves 3—1-foliolate. Shrubs or small trees.

ALLOPHYLUS. Flowers irregular or almost regular, with the place of the 5th petal empty. Sepals orbicular. Petals with scales. Fruit-lobes fleshy or sappy. Racemes simple or compound.

O O Flowers regular.

† Seeds without arillus.

SAPINDUS. Fruit-lobes deeply or to the base separated, by 2—3 or often solitary by abortion, the pericarp crustaceous or coriaceous, smooth. Testa crustaceous or membranous.

XEROSPERMUM. Fruit-lobes separated to the base, by pairs or solitary, the pericarp crustaceous, tubercled. Testa fleshy and pilose within, resembling an arillus.

† † Seeds truly arillate.

NEPHELIUM. Fruit-lobes 1—3, separated to the base, the pericarp coriaceous to crustaceous, smooth to variously tubercled, muricate, and echinate. Seeds entirely enveloped by the arillus.

POMETIA. Fruit-lobes 1—3, separated to the base, the pericarp corticate, smooth. Seeds arillate at the lower end. Hardly different from *Nephelium*.

* * *Fruit a dry dehiscent capsule, the valves from woody to coriaceous and membranous.*

O Ovules solitary in each cell.

× Trees or shrubs. Leaves pinnate. Capsule coriaceous or woody. Flowers regular.

† Petals cucullate, or the blade shorter than the cucullate scale.

SCYPHOPETALUM. Style obsolete. Petals cucullate, without scale.

PARANEPHELIUM. Petals broadly trigonous, smaller than the cucullate scales. Style long. Capsule 3-valved, woody, tubercled or aculeate-muricate. Leaves pinnate, the end-leaflets ternate.

† † Petals flat or nearly so, longer than the scale if present, or the petals minute or wanting altogether.

CUPANIA. Calyx cup-shaped or the sepals distinct. Capsule 3-quetrous or -lobed or didymous.

× × Twining tendril-bearing undershrubs. Leaves twice ternately foliolate. Capsule bladdery-membranous, inflated. Flowers irregular.

CARDIOSPERMUM. Sepals 4, the 2 outer ones small. Petals 4, with basal scales. Disk almost reduced to 2 round or linear glands opposite the lower smaller petals.

O O Ovules by 2 or more in each cell. Trees.

× Capsule membranous or chartaceous. Flowers regular, the sepals free. Leaves pinnate, alternate.

HARPULLIA. Petals without scales, but sometimes with inflexed lobes at the base of the blade. Stigma linear, often twisted. Capsule didymously 2-lobed, chartaceous, not winged. Seeds arillate.

ZOLLINGERIA. Petals with a woolly scale. Stigma 3-toothed. Capsule by maceration of the cell-walls often 1-celled, 3- or rarely 2-winged, chartaceous. Seeds without arillus.

× × Capsule thick or fleshy-coriaceous. Flowers irregular, the calyx tubular or bell-shaped. Leaves digitate, opposite.

ÆSCULUS. Flowers rather showy. Stigma simple.

Turpinia, Vent.

Conspectus of species.

Leaves apiculate to abruptly acuminate; flowers about 2 lin. across; fruits the size of a cherry, firmly fleshy,.....*T. pomifera*.

Leaves almost caudate; flowers minute, about a line across: fruits the size of a small pea,.....*T. montana*.

1. *T. POMIFERA*, DC. Prod. II. 3; Hf. Ind. I. 698 pp.—(*Dalrymplea pomifera*, Roxb. Corom. Pl. III. 276. t. 279. and Fl. Ind. I. 633; *T. sphærocarpa*, Hassk. Cat. Bog. 228; Miq. Fl. Ind. Bat. I/2. 593).

HAB. Frequent in the tropical forests of Pegu and still more so in those of Martaban and Tenasserim; also Chittagong.—Fl. Febr.; Fr. C. S.

2. *T. MONTANA*, (*Zanthoxylon montanum*, Bl. Bydr. 248; Miq. Fl. Ind. Bat. I/2. 670).

VAR. α. GENUINA, panicles very slender and lax, as long or longer than the leaves, the ultimate branchings almost filiform.

VAR. β. NEPALENSIS, (*Turp. Nepalensis*, Wall. Cat. 4277, non WA.; *T. pomifera* var. *Nepalensis*, Laws. in Hf. Ind. Fl. I. 699), panicles shorter and more compact, stiff.

HAB. Var. β. frequent in the hill-forests, especially the drier ones, and the pine-forests of Martaban, at 3000 to 7200 ft. elevation.—Fl. March.

Dodonæa, L.

1. *D. VISCOSA*, L. Mant. alt. 228; Hf. Ind. Fl. I. 697.—(*D. angustifolia*, L. f. Suppl. 218; Roxb. Fl. Ind. II. 256; *D. dioica*, Roxb. l. c.; *D. Burmanniana*, DC. Prod. I. 616; Wight Ill. t. 52; *D. pentandra*, Griff. Not. Dicot. 548).

HAB. Sandy beaches of the sea-shores of Tenasserim, from Amherst to Mergui; also Andamans, Narcondam Island.—Fr. Febr. March.

Acer, Lin.

Conspectus of species.

× Leaves simple, not lobed, with 3-basal nerves.

Leaves usually whitish beneath, the petiole 1—2 in. long; cymes glabrous, branchlets blackish, *A. laurinum*.

Leaves one-coloured, the petiole 3—6 lin. long; cymes paniced, glabrous; branchlets pale brown, *A. levigatum*.

× × Leaves 3-lobed and 3-nerved.

Glabrous; lobes of leaves long acuminate, entire, *A. isolobum*.

1. *A. LAURINUM*, Hassk. in Tydsch. Nat. Gesch. X. 138; Miq. Fl. Ind. Bat. I/2. 582.—(*A. niveum*, Bl. Rumph. III. 193. t. 167. B. f. 1; Hf. Ind. Fl. I. 693).

HAB. Frequent in the damp hill-forests of the Nattoung mountains in Martaban; at 4000 to 7000 ft. elevation; Tenasserim; also Ava, Hookhoom valley (Griff.).

2. *A. LÆVIGATUM*, Wall. Pl. As. rar. II. 3. t. 104; Hf. Ind. Fl. I. 693.

HAB. Upper Tenasserim, Moulmein District (Falconer).

3. *A. ISOLOBUM*, Kurz in Journ. As. Soc. Beng. 1872. 302; Hf. Ind. Fl. I. 694.

HAB. Frequent in the damp hill-forests of Martaban, at 5000 to 7000 ft. elevation.

Allied to *A. trifidum*, Thbg.

Schleichera, Willd.

1. *SCH. TRIJUGA*, Willd. sp. pl. IV. 1096; Roxb. Fl. Ind. II. 277; Bedd. Fl. Sylv. Madr. t. 119; Brand. For. Fl. Ind. 105. t. 20; Hf. Ind. Fl. I. 681.

HAB. Common in all leaf-shedding forests, especially the mixed ones, from Ava and Martaban down to Tenasserim.—Fl. March, Apr.

Lepisanthes, Bl.*Conspectus of species.*

Leaves quite glabrous, not stiff; racemes short and dense, clustered to almost solitary, axillary; pedicels very robust, about $\frac{1}{2}$ lin. long; petals inside and scale glabrous, *L. montana*.

Leaves large and stiff; leaflets slightly puberulous on the midrib beneath, rigid; racemes in larger or smaller axillary panicles; pedicels capillary, $1\frac{1}{2}$ —2 lin. long; scale densely white-villous fringed; simple-stemmed, palm-like treelet, *L. Burmanica*.

1. *L. MONTANA*, Bl. Bydr. 238 and Rumph. III. 151; Miq. Fl. Ind. Bat. I/2. 562.—(*L. Browniana*, Hiern. in Hf. Ind. Fl. I. 680).

HAB. Tenasserim, Tavoy and Keloben (Wall.).

2. *L. BURMANICA*, Kurz MS.—(*L. montana*, Hiern. in Hf. Ind. Fl. I. 679, non Bl.).

HAB. Not unfrequent in the tropical forests of the eastern and southern slopes of the Pegu Yomah and in Martaban, up to 2000 ft. elevation.—Fr. Febr. March.

Leaves very similar to those of *L. sessiliflora*, Bl. I fear that I am to a certain degree to blame for Hiern's misidentification of the plant, in having referred Brandis' specimens, as also my own, to Blume's *L. montana*, under which name I also put it down in my preliminary Report on the Pegu forests. It was hardly possible to avoid such mismatchings in a Report which was drawn up in less than 15 months, in which period more than 1000 species had to be named, and keys furnished for the discrimination of the species.

Hemigyrosa, Bl.

1. *H. CANESCENS*, Thw. Ceyl. Pl. 56. and 408; Hf. Ind. Fl. I. 671. (*Molinæ canescens*, Roxb. Corom. Pl. I. 43. t. 60 and Fl. II. 243).

HAB. Tenasserim, from Moulmein southwards.

I cannot lay so much stress upon the irregularity of the corolla or of the disk as to use it as a divisional character: the most naturally allied genera, such as *Hemigyrosa* and *Lepisanthes*, *Dittelasma*, *Erioglossum*, and *Sapindus*, or *Allophylus* and *Schmiedelia*, are forcibly removed from one another, and, indeed, it remains to be shewn whether this character can be upheld even as a generic differential. In *Sapindus trifoliatus*, L., at least, the flowers can as well be regarded as irregular, and the close affinity of this species to *Hemigyrosa canescens* cannot be denied.

Dittelasma, Hf.

1. *D. RARAK*, Hf. Ind. Fl. I. 672.—(*Sapindus Rarak*, DC. Prodr. I. 608; Bl. Rumph. III. 93. t. 169; *Sapindus polyphyllus*, Roxb. Hort. Beng. 29; Hf. Ind. Fl. I. 685).

HAB. Rather rare in the tropical forests of the Pegu Yomah; Tenasserim, Moulmein district, rare (Revd. Parish).

Erioglossum, Bl.

1. *E. RUBIGINOSUM*, Brand. For. Fl. 108.—(*E. edule*, Bl. Bydr. 229 and Rumph. III. 119. t. 166, Hf. Ind. Fl. I. 672; *Sapindus rubiginosus*, Roxb. Corom. Pl. I. t. 62 and Fl. Ind. II. 282; Griff. 548).

HAB. Frequent in the tropical, rare in the moister mixed forests, from Pegu and Martaban down to Tenasserim and the Andamans.—Fl. March, Apr.; Fr. May, June.

Allophylus, L.

Conspectus of species.

- × Rachis of racemes glabrous or nearly so. Bractlets shorter than the pedicels.

Leaflets glabrous, except a tuft of hairs in the nerve-axils beneath; racemes simple; berries the size of a pepper-corn, *A. racemosus*.

× × Rachis of racemes more or less pubescent or villous.

All softer parts and leaves pubescent or villous-pubescent; bractlets minute; berries the size of a pepper-corn, *A. serratus*.

Rather glabrous, the nerves of the leaves villous above: racemes usually recurved, the bractlets linear-subulate, as long or longer than the pedicels; berries the size of a pea, *A. aporeticus*.

1. *A. LITTORALIS*, Bl. Rumph. III. 124. (*Schmidelia littoralis*, Bl. Bydr. 232; *Ornithophe glabra*, Roxb. Fl. Ind. II. 267).

HAB. Frequent in the tidal and beach-forests, from Chittagong down to Pegu and Tenasserim; also Andamans.—Fl. Febr. to July.

2. *A. SERRATUS*, (*Schmidelia serrata*, DC. Prod. 610; WA. Prod. I. 110; *Schmidelia villosa*, Wight Icon. t. 401; *Ornithophe villosa*, Roxb. Fl. Ind. II. 265).

HAB. Coast-forests from Chittagong and Arracan down to Tenasserim.

3. *A. APORETICUS*, (*Schmidelia aporetica*, Kurz in Journ. As. Soc. Beng. 1870. 74; *Ornithophe aporetica*, Roxb. Fl. Ind. II. 264).

HAB. Frequent in the upper mixed forests of Arracan, up to 1200 ft. elevation.—Fl. Fr. Octob.

Hiern makes 2 species of Indian *Allophylis*, viz., those with 1- and those with 3-foliolate leaves, but this character falls to the ground, inasmuch as his *A. zeylanicus* var. 6 *grandifolia* (= *Schmidelia chartacea*, Kurz in Journ. As. Soc. Beng. 1874. 183) has sometimes 1- and 3-foliolate leaves on the same branch. I have not been able as yet to study this genus, but I have little doubt but that Hiern's eminently practical conclusions will not stand a scientific test.

Sapindus, Plum.

Conspectus of species.

× Leaves pubescent. Leaves unpaired-pinnate.

All softer parts pubescent; leaflets in 3—4 pairs with an odd one, *S. tomentosus*.

× × All parts glabrous.

O Leaves simple.

Leaves cordate at the narrowed base, the petiole very short and thick; anthers yellow; petals emarginate; the scale double, woolly; fruit-lobes the size of a pea, *S. Danura*.

Leaves acuminate or acute at the base, the petiole of the lower leaves long and longer; anthers purple: petals rounded at apex; the scale very short, simple, woolly; fruit-lobes about doubly smaller, *S. verticillatus*.

O O Leaves 2-foliolate.

Petiole only about 2 lin. long; leaflets oblong, about 2 in. long, sessile; panicles very slender; fruit-lobes didymous, 1½—2 lin. long, *S. microcarpus*.

1. *S. TOMENTOSUS*, Kurz MS.

HAB. Ava, Khakhyen hills, Mynela (J. Anderson).

2. *S. DANURA*, Voigt. Cat. Hort. Calc. 94; Hf. Ind. Fl. I. 684, excl. syn. *S. verticillata*, Roxb.—(*Scytalia Danura*, Roxb. Fl. Ind. II. 274; *Euphoria verticillata*, Lindl. Bot. Neg. t. 1059, non Roxb.).

HAB. Frequent in the tidal forests of the Andamans, also in those of Pegu and Tenasserim.

In this species abnormal leaves are often observed of a semipinnate and even perfectly pinnate shape. Roxburgh's *Scytalia verticillata* is in my opinion a different plant. Wallich's Cat. 8052 D., from HBC. and hills east of Sylhet, may be taken as the type of it.

3. *S. MICROCARPUS*, Kurz MS.

HAB. In the adjoining Siamese province of Kanbooree (Teysman); probably also in Upper Tenasserim.—Fr. Apr. May.

Xerospermum, Bl.

1. *X. NORONHIANUM*, Bl. Rumph. III. 100; Miq. Fl. Ind. Bat. I/2. 552.

HAB. Tenasserim (Helf. 1006).

Mr. Hiern confounds two generically different plants, viz., the true Malayan plant and *Sapindus glabratus*, Wall. (= *Cupania glabrata*, Kurz), from Sylhet and the Khasi hills.

Nephelium, L.*Conspectus of species.** *Petals none. Calyx toothed.*

O Fruits covered with soft fleshy subulate or angular-conical prickles.

Glabrous; leaflets glaucous or whitish beneath; prickles of the fruit fleshy, long, conically angular, truncate, glabrous, *N. Griffithianum*.

As preceding but leaflets broader; prickles of fruit variously curved and incurved, $\frac{1}{2}$ — $\frac{3}{4}$ in. long, tawny pubescent at their dilated bases, subulate or rarely 2-cleft, *N. chryseum*.

Leaflets more coriaceous, pale coloured beneath or almost one-coloured; fruits and prickles as in preceding but quite glabrous, *N. lappaceum*.

O O Fruits tubercled.

Leaflets very coriaceous, small, the net-venation quite obsolete, the nerves thin and faint; fruit-lobes ellipsoid-oblong, the size of a prune, covered with sharp compressed-tesselate tubercles, *N. Litchi*.

* * *Petals present. Calyx cleft to $\frac{1}{2}$ or to near the base.*

Leaflets firmly coriaceous, glaucescent beneath, in drying fuscous, the lateral nerves thin and slightly prominent; fruit-lobes oblong, shortly muricate, the murices about a line long, sharp, *N. rubescens*.

Leaflets thin coriaceous, more or less glaucescent beneath, the numerous (14—20) lateral nerves strongly prominent beneath; fruit-lobes ovoid-oblong, the size of a plum, perfectly glabrous, strongly tubercled as in *N. Litchi*, but not tessellate, .. *N. hypoleucum*.

As preceding but leaflets usually smaller; fruit-lobes globose, the size of a small cherry, obsoletely tubercled or almost smooth, minutely tawny velvety all over, *N. Longanum*.

1. *N. GRIFFITHIANUM*, Kurz in Journ. As. Soc. Beng. 1872. 303.—(*Sapindaceae*, Griff. Not. Dicot. IV. 550. t. 599. fig. 1).

HAB. Ava, Khakhyen hills (Griff. J. Anderson).—Fr. May.

Hiern identifies the above species with *N. mutabile*, Bl., a species which is distinguished at once by its irregularly tubercled fruit-lobes (hence Blume formerly confounded it with *Euphoria Longan*). His description seems to have been drawn up from specimens belonging to two or three different species, but chiefly to *N. chryseum*, Bl. (Maingay No. 449, Griff. 997/1).

2. *N. LAPPACEUM*, Linn. Mant. I. 125; Hf. Ind. Fl. I. 687.—(*Scytalia Rampoutan*, Roxb. Fl. Ind. II. 271).

HAB. Upper-Tenasserim (Brandis),—cultivated?

3. *N. LITCHI*, Camb. in Mém. Mus. Par. XVIII. 30; Wight Icon. t. 43; Hf. Ind. Fl. I. 687.—(*Scytalia Litchi*, Roxb. Fl. Ind. II. 269).

HAB. Chittagong, cultivated.—Fl. Febr. to March; Fr. Apr. to June.

4. *N. RUBESCENS*, Hiern in Hf. Ind. Fl. I. 688.

HAB. Tenasserim (Wall.) *teste* Hiern.

5. *N. HYPOLEUCUM*, Kurz in Journ. As. Soc. Beng. 1871. 50 and 1874. 183, sub No. 10.

HAB. Rare in the tropical forests along the eastern slopes of the Pegu Yomah, but frequent in those of Martaban, up to 1000 ft. elevation; also cultivated.—Fl. Jan.; Fr. Apr.

N. B.—This species occurs also in Hindostan (Wight 540), Concan (Stocks, &c.), and wild in the sholas of the Pulney hills.

6. *N. LONGAN*, Camb. in Mém. Mus. Par. XVIII. 30; Hf. Ind. Fl. I. 689.—(*Scytalia Longan*, Roxb. Fl. Ind. II. 170; *Euphoria Longana*, Lamk. Dict. III. 574; Bot. Mag. t. 4096; Bot. Neg. t. 1729; Bedd. Fl. Sylv. Madr. t. 156^p).

HAB. Rare in the tropical forests along the eastern slopes of the Pegu Yomah; also cultivated.—Fl. March; Fr. May to June.

Pometia, Forst.

1. *P. TOMENTOSA*. Bth. and Hf. Gen. pl.; Hf. Ind. Fl. I. 691 pp.—(*Irina tomentosa*, Bl. Bydr. 236; Miq. Fl. Ind. Bat. I/2. 558; *Eccremanthus eximius*, Thw. in Hook. Kew Journ. VII. 272. t. 9; *P. eximia*, Bedd. Fl. Sylv. Madr. t. 157).

HAB. Common in the tropical forests of the Andamans.—Fr. May, June.

Distinguishable at once from *P. pinnata*, Forst., by its small and very differently shaped fruits.

Paranephelium, Miq.

1. *P. XESTOPHYLLUM*, Miq. Suppl. Fl. Sumatr. 509.—(*Mildea xestophylla*, Miq. Ann. Mus. Lugd. Bat. III. 88).

HAB. Tenasserim, Moulmein District (Falconer).

In HBC. are some leaves from the Khakhyen-hills which apparently represent a second Burmese species of this genus, if they should not be identical with Hiern's *Scyphopetalum*, the description of which is too imperfect to enable one to recognize from it the plant intended. They have the 3 end-leaflets similarly ternate and in texture and nervature are almost the same as the above.

Scyphopetalum, Hiern.

1. *S. RAMIFLORUM*, Hiern in Hf. Ind. Fl. I. 676.

HAB. Ava, hill-forests of Hookhoom valley (Griff.) *teste* Hiern.

I have not seen this plant, and place it near *Paranephelium* simply by guess. The petals are differently described and the style is said to be obsolete,—characters which would keep it distinct from Miquel's genus.

Cupania, Plum.

Conspectus of species.

Subg. I. Eu-Cupania. Capsules clavate-pyriform, more or less conspicuously 3-lobed or angular, coriaceous.

* *Petals present, furnished with a double scale.*

× Leaves and panicles glabrous.

Leaflets opaque, glaucescent beneath, the nerves thin; rachis narrowly winged upwards,

.. *C. Griffithiana.*

Leaflets glossy, one-coloured, strongly nerved and net-veined; rachis terete, *C. glabrata.*

× × Leaflets beneath and panicle shortly tawny pubescent.

Leaflets chartaceous, fuscous in drying, opaque, *C. fuscidula.*

* * *Petals none or minute, without scales.*

Net-venation minute and obsolete; filaments glabrous; leaflets in 2 pairs, *C. Lessertiana.*

Net-venation strong and prominent on both sides; filaments exerted, pubescent; leaflets not fuscous, *C. Sumatrana.*

Net-venation thin but prominent; filaments short, pubescent; leaflets fuscous, .. *C. Helferi.*

Subg. II. Arytera, Bl. Capsule nearly to the base divided into 2 divergent lobes, coriaceous.

Leaflets chartaceous, reddish fuscous beneath, glabrous; panicles tawny puberulous, .. *C. adenophylla.*

1. *C. GRIFFITHIANA*, Kurz (*C. pleuropteris*, Hiern in Hf. Ind. Fl. I. 677, non Bl.).

HAB. Tenasserim (Helf. 983).

What Mr. Hiern describes as *C. pallidula* (Maingay 442; Griff. 982) is *C. pleuropteris*, Bl.

2. *C. GLABRATA*, Kurz in Journ. As. Soc. Beng. 1872. 303. (*Sapindus glabratus*, Wall. Cat. 8095).

HAB. Rather frequent in the tropical forests along the eastern slopes of the Pegu Yomah and also in Martaban.—Fl. Apr. May.

I do not know what Hiern describes under the above name, but generally, I think, he has my plant under view. *Sapindus squamosus*, Roxb. is *Cupania regularis*, Bl., differing from it (*Sapindacea* 4. Java, Horsfield Coll. is the typical form) in having the petiobules not incrassate.

3. *C. FUSCIDULA*, Kurz in Journ. As. Soc. Beng. 1872. 302; Hf. Ind. Fl. I. 677.

HAB. Tenasserim (Helf. 993).

4. *C. LESSERTIANA*, Camb. Mém. Mus. Par. XVIII. 46. t. 3.; Hf. Ind. Fl. I. 678.

HAB. Frequent in the tropical forests of the Andamans; Tenasserim, Mergui.—Fl. May, June.

5. *C. SUMATRANA*, Miq. Fl. Ind. Bat. I/2. 609; Hf. Ind. Fl. I. 678.

HAB. Rare in the tropical forests of the Central Pegu Yomah; apparently frequent in Tenasserim from Moulmein down to Mergui.—Fr. Apr. May.

6. *C. HELFERI*, Hiern in Hf. Ind. Fl. I. 679.

HAB. Tenasserim or Andamans (Helf.) *teste* Hiern.

Not known to me, unless No. 982/1 of Helfer's collection be meant.

7. *C. ADENOPHYLLA*, Planch. in Hf. Ind. Fl. I. 677.

HAB. Tenasserim, from Moulmein to Mergui.

Cardiospermum, L.

Conspectus of species.

Slightly pubescent or glabrous; leaflets often acuminate produced; flowers 1—1½ lin.,
... *C. Halicacabum*.

Softly pubescent; leaflets usually short and broad; flowers 2—3 lin., *C. canescens*.

1. *C. HALICACABUM*, L. sp. pl. 925; Roxb. Fl. Ind. II. 292; Wight Icon. t. 508; Bot. Mag. t. 1049; Griff. Dicot. 546. t. 599; Hf. Ind. Fl. I. 670.

HAB. Not unfrequent in waste places, along river banks, &c., of the plains, all over Burma.—Fl. and Fr. H. and R. S.

2. *C. CANESCENS*, Wall. Pl. As. rar. I. 14. t. 14; Wight Icon. t. 74; Hf. Ind. Fl. I. 670.

HAB. Ava, apparently common.—Fl. Fr. ∞.

Harpullia, Roxb.

1. *H. CUPANIODES*, Roxb. Fl. Ind. I. 645; Hf. Ind. Fl. I. 691 (*Streptostigma viridiflorum*, Thw. in Hook. Journ. Bot. VI. 298. t. 9. A; *H. imbricata*, Thw. Enum. Ceyl. Pl. 56; Bedd. Fl. Sylv. Madr. t. 158).

HAB. Frequent in the tropical forests of the Andamans; Chittagong. Fl. June.

Æsculus, L.

1. *A. ASSAMICA*, Griff. Not Dicot. 541.—(*Hippocastaneæ* sp., Griff. l. c.; *A. Punduana*, Wall. Cat. 1189, *nomen nudum*; Hf. Ind. Fl. I. 675).

HAB. Damp hill-forests of Upper Tenasserim.—Fl. Apr.

Zollingeria, Kurz.

1. *Z. MACROCARPA*, Kurz in Journ. As. Soc. Beng. 1872. 303; Hf. Ind. Fl. I. 692.

HAB. Not unfrequent in the dry forests of the Prome District, along the spurs of the Yomah.—Fl. probably close of R. S.; Fr. March.

The genus is named in honour of the late H. Zollinger, the author of so many valuable botanical papers, which, owing to their being written in the Dutch language, remain almost unknown to the majority of botanists.

[To be continued.]
